PERCEIVED CONSTRAINTS TO ART MUSEUMS/GALLERIES PARTICIPATION

A Thesis

by

JINHEE JUN

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

August 2003

Major Subject: Recreation, Park and Tourism Sciences

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Approved as to style and content by:

Joseph T. O'Leary (Chair of Committee)	Tazim Jamal (Member)
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ABSTRACT

Perceived Constraints to Art Museums/Galleries Participation. (August 2003)

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Research on constraints to leisure and recreation participation has focused on various types of activities in which people would like to participate, are currently participating, or have stopped participating. However, little attention has been made to identify constraints associated with art activities participation.

The objectives of this study were to 1) identify factors which limit people's attendance to art museums/galleries; 2) address the issue of the internal heterogeneity between two constrained leisure behaviors; 3) reveal the role of previous participation, interest in future participation, gender and lifecycle in the perception of constraints to art activities; and 4) show the validity of segmentation criteria which are previous participation, interest in future participation, gender and lifecycle.

Data from the Survey of Public Participation in the Arts (SPPA 1997) was used in this study. Total sample was divided into four categories by previous participation and interest in future participation. Further, the categories 'participants with interest' and

‘non-participants with interest’ were sub-divided based on gender and lifecycle. The results revealed that time, cost, access and availability were considered as the most significant constraints to art activity participation across all segments. However, the array and intensity of constraints differed depending on the types of constrained leisure. In addition, different types of constraints were experienced with different intensity by segments defined by previous participation, interest in future participation, gender and lifecycle. The analyses demonstrated that previous participation, interest in future participation, gender and lifecycle were important segmentation criteria in constructing homogeneous groups with respect to perceived leisure constraints.

To My Parents and My Husband

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CHAPTER I

INTRODUCTION

Background of the Study

Over the past decade, researchers and practitioners have sought to understand the factors which limit or prohibit individuals' desire to participate in leisure activities, to increase their leisure time and to achieve a desired level of enjoyment. The interest of researchers and practitioners has been based on the assumption that identifying the extent and the ways to which an individual is limited from leisure participation helps to improve leisure management (Kay & Jackson, 1991; McGuire, 1984; Scott & Jackson, 1996). For instance, Scott and Jackson (1996) suggested that leisure and recreation agencies should develop, deliver, and market their service in ways that allow for the distinctive sets of constraints encountered by sub-groups, establishing strategies proposed by current and potential clients (Godbey, 1985; Jackson, 1988; McGuire & O'Leary, 1992; Searle & Jackson, 1985b).

In leisure constraints and constrained leisure research, various specific activities have received attention including pool (Chick & Roberts, 1989; Chick, Roberts, & Romney, 1991), golf and tennis (Backman, 1991; Backman & Crompton, 1989,1990), trailer use (Bialeschki & Henderson, 1988), camping (Dunn, 1990), bridge (Scott, 1991), hunting (Backman & Wright, 1993; Wright & Goodale, 1991), physical exercise (Shaw

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This thesis follow the style and format of the *Journal of Leisure Research*

et al., 1991), and sport fishing (Aas, 1995; Ritter, Ditton & Riechers, 1992). However, this overview of activities in leisure constraint research shows that most of activities are related to outdoor recreation. With some exceptions, almost no attention has been made to identify factors that may limit or prohibit participation in art activities in spite of the fact that art participation is one of the major leisure activities. According to the National Endowment of the Arts (NEA), half of the U.S. adult (18 and older) population attended at least one of seven art activities (jazz, classical music, opera, musical or non-musical plays, ballet or art museums/galleries) during the previous 12 months (National Endowment of the Arts, 1998). Moreover, thirty-five percent of American adults made at least one visit to an art museum or gallery in 1997. With this significant role of art activities in individuals' leisure, assessing the extent and the ways of how constraints affect people's participation in art activities helps to better understand various aspects of constrained leisure.

This study is primarily concerned with the constraint differences associated with various aspects of people's leisure behavior in art activities and demographic characteristics.

The perceptions of gender differences and lifecycle variations provide a theoretical starting point to explore the experience of leisure constraints, and to distinguish different constraints experienced by sub-groups of the population. According to Jackson and Scott (1999), there are great variations in the perception of constraints depending on personal and situational circumstances signified by demographic descriptors. Among a variety of demographic characteristics, gender has received much

attention by researchers in leisure constraint study and is considered one of the most important determinants in level of perceived constraints. The fact that men and women have very different life circumstance and expectation causes gender difference in the experience of constraints and, in turn, leisure behavior (Iso-Ahola, Jackson & Dunn, 1994). Most of literature showed that leisure for women is more constrained than leisure for men because women, unlike men, are highly influenced by the ethic of care (e.g., Harrington, Dawson & Bolla, 1992; Henderson & Allen, 1991), the lack of a sense of entitlement to leisure (e.g., Green, Hebron & Woodward, 1990; Shaw, 1999), body image (Frederick & Shaw, 1995) and fear of violence (e.g., Whyte & Shaw, 1994).

While there are between gender differences in perceived constraints, the experience of constraints also varies across lifecycle stages in the same gender group. Indeed, new circumstances related to aging generate conditions which may alleviate or exaggerate some constraints (Jackson & Scott, 1999). Depending upon the types of constraints, there appear several patterns of variations across lifecycle stages such as increased or decreased relationship and U-shaped or inverted U-shaped relationship. Thus, inclusion of the perspective of lifecycle provides enhanced insight into understanding the leisure constraints of individuals.

In addition, it appears that the array and intensity of constraints differ depending on the types of constrained leisure such as the inability to maintain participation at or increase it to desired levels, ceasing participation in former activities, and the nonuse of public leisure services. As part of the ongoing process of concept refinement in leisure constraint research, researchers questioned whether the same constraints operate in the

same ways at each stage of the decision-making process. According to Jackson and Rucks (1993), even though certain constraints showed absolute importance to various stages of the decision-making process, several barriers become more or less important depending on the precise stage of the leisure decision-making process at which they are experienced. Accordingly, there are significant differences of constraints in absolute and relative importance between failure to achieve desired level of participation and inability to participate in new activity.

For leisure practitioners, it is so important to find groups with latent demand among non-participants as well as participants. Therefore, they can develop policies, planning, and marketing strategies that eliminate or reduce constraints experienced by the current and potential client groups. According to Wright and Goodale (1991), non-participants as well as participants could be divided into several sub-groups based upon their level of participation and interest in future participation. The results of the study showed that a group of non-participants with interest in participation were likely to be converted to participation. Furthermore, there was apparent latent demand among participants who expressed a desire to increase the frequency of their participation. Segmentation of respondents into several groups defined by participation frequency and interest in future participation suggested that each sub-group of non-participants experienced different sets of constraints to participation. In addition, participants faced different constraints than non-participants. Therefore, it is a useful to investigate the perception of constraints experienced by participants and non-participants who have the interest in participation.

Given the important role of gender and lifecycle in the perception of constraints, the heterogeneity among constrained behaviors, and the substantial presence of art participation population in the leisure activity, this study examines the art museums/galleries market to identify constraints influencing art visitation of current and potential clients to art museums/galleries. In this research, a multi-segmentation approach is utilized to address the heterogeneity of non-participants and participants in the art market and to differentiate sets of constraints by each group.

Objective of the Study

Specific objectives of this study were to:

1. Identify constraints that inhibit people's attendance at art museums/galleries.
2. Address the issue of the internal heterogeneity of constrained leisure between the inability to increase participation to desired levels and to participate in new activities.
3. Determine the role of previous participation, interest in future participation, gender and lifecycle in the experience of constraints to visitation at art museums/galleries.
4. Demonstrate the value of segmentation variables of previous participation, interest in future participation, gender and lifecycle.

Definition of Terms

Operational definitions of variables used in this study are as follows:

Constraint: factors that are perceived or experienced by individuals to inhibit or prohibit participation and enjoyment in leisure (Jackson, 1988).

Lifecycle: all the different levels of development that an adult goes through during its life (Gould, 1975).

Organization of the Thesis

The thesis consists of five chapters. Chapter I includes a background context of this study, objectives to be accomplished, and definition of terms. In Chapter II, previous research findings which are associated with this study are reviewed. Based upon identified relationship between variables, Chapter III discusses data that has been used and research methodology. Descriptive findings and hypotheses tests are provided in Chapter IV. In Chapter V, a discussion of the results of this study and its implication for leisure marketing and future research are presented.

CHAPTER II

REVIEW OF RELATED LITERATURE

The related literature review in this study consists of three parts. The first section addresses a broad retrospective glance at the last forty years of North American research on leisure constraints. The second section is concerned with studies conducted by the National Endowment of the Arts that examine the relationships between art participation, demographic variables and constraints. The third section deals with reviewing market segmentation studies in the context of leisure, recreation and tourism as well as marketing.

Leisure Constraint Research

Constraints research has become one of the major themes in leisure studies over the last two decades (Jackson & Scott, 1999). One of the main goals of leisure study is to understand people's choice and behavior in the leisure domain of their lives. If we define leisure as perceived freedom, most people are constrained to some degree in their leisure. For a comprehensive understanding of individual leisure choice and behavior, it is necessary to examine aspects both positive (motivation and expected benefits) and negative (barriers) factors. Therefore, understanding constraints and their impacts should give scholars more insight into leisure and the vague relationship among values and attitudes, leisure preferences, and actual leisure behavior (Jackson, 1991).

A broad review of last forty years of research on leisure constraints suggests the existence of a number of eras, each characterized by certain issues, concepts and theoretical frameworks, methodologies, and disciplinary perspectives (Jackson & Scott, 1999). These eras can be described as: (1) early studies of constraints, (2) rapid development and redefining the concept of constraints, and (3) the emergence of new concepts and models.

Early Studies of Constraints

The first attention to constraints is traced back to the 19th century. According to Goodale and Witt (1989), the origins of recreation service provision were founded in attempts to overcome obstacles to the worth of leisure time use, consequently, the constraints concept have been center to the emergence of leisure studies as a focus of academic investigation. Goodale and Witt (1989) documented that: "concern about barriers, nonparticipation in recreation activities, and lack of leisure opportunities has always been an important progenitor of park, recreation, and leisure services" (p. 422). It was assumed that the barrier of 'lack of opportunity' is a reason for non-participation, therefore the provision of services was based on the principle of satisfying demand, or the wish to convert latent demand into manifest or expressed demand by providing such services (Jackson & Scott, 1999).

While early concern about barriers was a simple assumption instead of an outcome based on research, in the 1950s and 1960s several studies were undertaken to identify the correlates of recreation participation. In the multi-volume reports of the

Outdoor Recreation Resources Review Commission (ORRRC), some volumes were of particular interest because they dealt directly with the issue of barriers to participation, examining why people do not participate in outdoor activities to the full extent of their desires (Ferris, 1962; Mueller, Gurin, & Wood, 1962). For example, in Report Number 19 Ferris et al. (1962) examined the reason people do not participate in certain outdoor recreation activities at their desired level. The study showed that popular activities have minimal barriers and that physical activities which required some type of skill were engaged in by fewer people (Mueller et al., 1962).

Based upon the ORRRC reports, Cicchetti (1972) examined participation in outdoor recreation activities. By comparing data from ORRRC, the study concluded that people do not participate in activities to the fullest extent of their desire due to constraints associated with time. In addition, people are constrained by the issue of ability, facility, and equipment in initiating participation.

Most studies on leisure and recreation conducted in this stage were entirely empirical, quantitative research, focusing on recreational activities and its socio-economic antecedents on item-by-item analysis (Jackson, 1991). Practical concern with the provision of opportunity characterized the first stage, from the origin of the park and recreation movement to about 1970 (Jackson & Scott, 1999).

Rapid Development and Redefining the Concept of Constraints

By the end of the 1970's into the early 1980's, research related to constraints was considered to be fragmented and often used poor measures of variables to be studied

(Jackson, 1988). As a result, the 1980s was a time of redefining the concept of barriers to recreation participation and clarifying and developing appropriate measures (Jackson, 1991). In addition, there was a significant progression in literature of leisure constraints. Four influential papers (e.g., Boothby, Tungatt, & Townsend, 1981; Francken & Van Raiij, 1981; Romsa & Hoffman, 1980; Witt & Goodale, 1981) appeared in the early 1980s (Table 1), followed by a dramatic growth in empirical studies to directly address the interrelated questions of non-participation and barriers to participation in recreation (Godbey 1985; Howard & Crompton 1984; Jackson 1983; Jackson & Searle 1983, 1985; McGuire 1982, 1984; McGuire, Dottavio, & O'Leary 1986; Searle & Jackson 1985a). Through the many attempts to understanding the complex phenomenon of non-

TABLE 1

Four Papers Which Addressed Barriers to Participation in the Early 1980's

Author(s)	Barriers
Boothby, Tungatt, & Townsend (1981)	43 specific reasons for ceasing participation in sports activities: 6 main groups: loss of interest, lack of facilities, physical disabilities or inadequate fitness, leaving a youth organization, moving away from the area, and no time to spare
Francken & Van Raiij (1981)	Socio-economic antecedents of relationships between barriers and leisure satisfaction Two sets of barriers: external circumstances (lack of time and money, geographical distance, and lack of facilities) and internal (personal capacities, abilities, knowledge, and interest)
Romsa & Hoffman (1980)	Four sets of reasons for non-participation: lack of interest, time, facilities, and funds
Witt & Goodale (1981)	18 barriers to leisure enjoyment as a function of family stage (no classification used): Barriers included time, skill, money, and opportunities

participation and associated factors, the concepts have been defined in a variety of ways.

For instance, Boothby et al. (1981) conceptualized two groups of non-participants who previously participated in activities but had stopped for one or more reasons, and others who considered non-participation as activities in which no attempt has been made to initiate involvement in certain activities (e.g., Godbey, 1985; Howard & Crompton, 1984; Jackson, 1983; Jackson & Searle, 1983; Searle & Jackson, 1985a). Others expanded the dependent variables to include variables such as enjoyment (Witt & Goodale, 1981), and leisure satisfaction (Beard & Ragheb, 1980). Due to the apparent diversity in the behaviors to which constraints have been related, literature in this stage began broadening the definitions of barriers to encompass (Goodale & Witt, 1989):

1. People who were formerly participants in an activity but who have ceased participating (e.g., Backman & Crompton, 1989, 1990; Boothby, Tungatt, & Townsend, 1981; Dunn, 1990; Jackson & Dunn, 1988, 1991; McGuire et al., 1986; McGuire, O'Leary, Yeh, & Dottavio, 1989)
2. People who participate but fail to achieve the desired level of satisfaction or enjoyment (e.g., Francken and Van Raiij, 1981; Witt & Goodale, 1981)
3. People who desire, but are unable to participate in new activities (e.g., Jackson, 1990; Jackson & Dunn, 1991; Jackson & Searle, 1983; Searle & Jackson, 1985a)
4. People who wish but are unable to increase the frequency or range of their participation (e.g., McGuire, Dottavio, & O'Leary, 1986; Shaw, Bonen, & McCabe, 1991; Wall, 1981)
5. People who cease one participation and take up another (replacement) activity

(e.g., Jackson & Dunn, 1988; McGuire, O'Leary, Yeh, & Dottavio, 1989).

During the 1970s and 1980s, there was a growing interest in socio-psychology which led attention in leisure study to move from actual participation in activities, time-based concept toward subjective 'experiential' meaning and value of leisure as experienced and defined by the participant (Jackson & Scott, 1999). This trend was followed by broadening a conceptualization of barriers as not only external/physical but also internal/social. Many researchers have made attempts at classifying barriers into sub-groups; motivational/physical barriers (Howard & Crompton, 1984), internal/external barriers (Jackson & Searle, 1985), blocking/inhibiting barriers (Jackson & Searle, 1985), and temporary/permanent constraints (Iso-Ahola & Mannell, 1985). Based upon Jackson and Searle's synthesis (1985) of various research, Goodale and Witt (1989) identified three categories for types of barriers:

1. Non-participation because of lack of interest (e.g., Romsa & Hoffman, 1980)
2. Non-participation because of the influence of internal or person-specific barriers, such as lack of knowledge of opportunities, motivation, or skills (e.g., Ellis & Witt, 1984; Romsa & Hoffman, 1980)
3. Non-participation because of the influence of external or situation-specific barriers such as lack of facilities or programs (e.g., Jackson, 1983; Jackson & Searle, 1983) (p. 427)

Even though many researchers during this stage moved toward a deeper understanding of constraints by recognition of dimensions on which constraints exist, generalization based upon analyzed dimensions, and a recent model about the nature and

influence of constraints (Crawford & Godbey, 1987; Godbey, 1985; Iso-Ahola & Mannell, 1985; Jackson & Searle, 1985), there was overemphasis on investigations of 'structural constraints' (Crawford & Godbey, 1987) or 'intervening constraints' (Jackson, 1990; Shaw, Bonen, & McCabe, 1991) which inhibit participation or leisure engagement once a preference or desire for an activity has been formed (Jackson & Scott, 1999).

While some investigated barriers to participate in general, others paid attention to specific activities including pool players (Chick & Roberts, 1989; Chick, Roberts, & Romney, 1991), golfers and tennis players (Backman, 1991; Backman & Crompton, 1989,1990), trailer users and nonusers (Bialeschki & Henderson, 1988), campers (Dunn, 1990), and bridge players (Scott, 1991).

Advancements summarized above are mirrored in an important shift in terminology associated with barriers to recreation participation (Jackson, 1991). An advance of the terminology started with replacing "barriers to recreation participation" with "leisure constraints." The term "barriers" were usually recognized as any factor that affected leisure participation in somewhat negative way such as limiting participation, reducing the frequency or intensity of participation, and reducing the quality of the experience or satisfaction gained from the activity (Goodale and Witt, 1989; Jackson, 1988). While 'constraints' was more encompassing by including barriers before a preference was made, 'barriers' were likely to focus on one particular constraint that intervenes between preference and participation (Crawford & Godbey, 1987). Another distinguished improvement in terminology was to replace the word 'recreation' with 'leisure' to help broaden the focus of investigation (Jackson, 1991). This shift in

terminology resulted in dropping the word ‘participation’ and replacing it with ‘constraints’. According to Jackson (1988), this last shift was “…(B)ased on the recognition that constraints may influence far more than the choice to participate or not, but many other aspects of leisure, including preference and satisfaction” (p.284).

Various movements in this stage were likely to reflect researcher attempts to approach the concept of constraints from a diversity perspective, avoiding focus on one line of thought. However, despite difference in the purpose of these studies, the subject used, or the type of analysis employed, the major body of literature found that “people appear to experience a basic core of constraints regardless of their activity preferences. On the other hand, activity-based variation in the strength of constraints, and the occasional ones of kind, warn us against over-generalizing the findings derived from research on one type of activity to other types without empirical support” (Jackson & Scott, 1999; p. 303).

The Understanding of Patterns and Diversity

In a third stage of concept development, there were increasing efforts in measuring leisure constraints, understanding various ways in which constraints enter into and influence people’s leisure and recreation decision-making process. This ‘growing sophistication’ of leisure constraint research seems to address some fundamental limitations which previous research inevitably faced. Based on their thorough review of previous research, Jackson and Scott (1999) classified the emerging phenomena in constraint research into three categories: (a) classification of constraints and the

recognition of dimensions; (b) broadening of the range of criterion variables against which to measure the impact of constraints: and (c) analysis of some of the factors though to explain within-population variations in constraints.

Classification of Constraints and the Recognition of Dimensions

One of the serious impediments to the development of knowledge of leisure constraints was variation in the number and types of items that have been included in previous studies. For instance, Rosma and Hoffman (1980) examined four sets of reasons for non-participation (lack of interest, time, facilities and funds). Francken and Van Raiij (1981) classified barriers into two sets, called "external" and "internal". Wall (1981) listed three main constraints to leisure engagement (insufficient time, lack of money, and lack of opportunity). In 1988, Henderson, Stalnaker, and Taylor developed a more comprehensive leisure constraints list including 55 items. However, even their list did not include a whole range of constraints. According to Jackson (1988), over one hundred distinct items have been administered in previous studies. As a result of the lack of consistency in these research studies, conceptual classifications were needed to help scholars better conceptualize their attempts to understand constraints to leisure by comparing the findings of leisure constraint research and drawing generalization.

In response, several researchers have begun to develop comprehensive scales consisting of numerous items rather than just a few. They recognized that patterns of constraints exist and can be detected by empirical classification techniques such as factor analysis, multidimensional scaling, and cluster analysis (e.g., Backman, 1991;

Henderson et al., 1988; Jackson, 1993; McGuire, 1984; Wright & Goodale, 1991). Several common dimensions have emerged in many of these studies. For example, Backman (1991) used a principle factor analysis with an oblique rotation to determine the factor structure of the constraint scale. Five factors (individual, social, distribution, transportation, and promotion) emerged in his study. In McGuire's research (1984), factor analysis determined five underlying dimensions extracted from 30 items in the constraints questionnaire. In these studies, mean scores for dimensions derived from factor analysis were used to replace or complement item-by-item analysis.

The results in these studies imply that there is a stable and meaningful core of leisure constraints regardless of the specific circumstances of a particular study or the nature of the sample (Jackson & Scott, 1999). Moreover, these advancements indicate researchers' efforts to better understand leisure constraints by searching for regularities or patterns (Jackson, 1993). "The ensuing results, based on the analysis of "dimensions" or "domains" of constraints, have enhanced the ability to detect similarities and differences between studies, and thereby to establish consistencies and generalizations about the impacts of constraints on leisure behavior, and about variables that are associated, statistically and conceptually, with such patterns" (Jackson & Scott, 1999; p. 304).

Broadening the Range of Criterion Variables: The "Heterogeneity" Issue

Through the 1980s, interest in leisure constraint research broadened in several important and connected ways. Constraints do not just effect people's leisure at the stage

of overt participation, but in a variety of ways including the desire but inability to participate in a new activity, ceasing participation in a former activity, the inability to participate as frequently as desired, and negative impacts on the quality of the leisure experience. Based upon the recognition that constraints enter into and influence people's leisure at many stages of the decision-making process, the consequent question arises as to whether the indicators are interchangeable or not, and are internally homogeneous or heterogeneous concepts of constrained leisure (Hultsman 1993a; Jackson & Dunn 1991; Jackson & Rucks 1993; Searle & Brayley 1992). The issue was first addressed empirically by Jackson and Dunn (1991). Criticizing previous research which mainly used a single measure of constrained leisure as a criterion variable against which to access the impact of constraints, the authors compared the characteristics and the relative importance of constraints on two aspects of leisure behaviors, ceasing participation and non-participation in a desired activity. The results from two large-scale public questionnaire surveys in the Province of Alberta, Canada showed that barriers for ceasing participation are significantly different from those to participation in a desired activity. Similar findings have been reported by Hultsman (1993a), Jackson and Rucks (1993), and Searle and Brayley (1992) (Table 2).

The results of comparative studies of this kind have been quite consistent. Regardless of differences in sample composition, instrumentation, data analysis technique, and the specific item that varied in importance as reasons for ceasing participation or as barriers to new participation, there is a common core of constraints.

TABLE 2

Contexts in Which the Internally Homogeneous Concept of Constrained Leisure Has Been Examined

Authors	Sample	Barriers for ceasing participation	Barriers for beginning participation in a desired activity
Jackson & Dunn (1991)	The adult population in Alberta, Canada	Physical inability	Cost of equipment
Jackson & Rucks (1993)	424 junior high/high school (7^{th} –12^{th} grade) students in Edmonton, Alberta	Doing too many other things	Cost of participation Uncertainty of place to participation Lack of companion Lack of transportation Lack of sufficient skill
Hultsman (1993a)	Adolescents aged between 10 and 15 years living in a southwestern U.S. city	Dislike the leader and the rule of activities	Lack of transformation Parental influence Lack of required skill
Searle & Brayley (1992)	1,053 adults and 156 11^{th}- and 12^{th}-grade students Manitoba, Canada	Lack of time Poor health Loss of interest	Lack of opportunity

However, although there was a reasonable degree of similarity in the two lists of constraints, certain items appeared more frequently or ranked higher on one list than on the other (Searle & Brayley, 1992). Constraints related to one criterion variable could not be generalized to the other (Hultman, 1993a).

In conclusion, Jackson and Rucks (1993) documented "several, if not all, types of constraints became more or less important depending on the precise stage of the leisure decision-making process at which they are experienced, whereas other constraints

are unique to a particular stage" (p.229).

However, even though there appears to be diversity in the behavior to which constraints are related, most of studies addressing the issue of the internal homogeneity of constrained leisure have focused on only two aspects of participation; ceasing participation in a former activity and initiating participation in a new one. Few have looked at the differences of perceived constraints between participants who wish to increase the level of participation and non-participants who would like to participate. Examples include Jackson and Dunn (1988) and Wright and Goodale (1991). The finding of Wright and Goodale's (1991) study showed that interested non-participants perceived monetary costs and access/ opportunities to be greater constraints than did all interested participant groups. On the other hand, infrequent and moderate participants who are interested in increasing the frequency in which they hunt appear to be constrained more by the conflict between hunting and work/family commitments than interested non-participants. Arising out of the heterogeneity issue in leisure constraint research, this study hypothesizes that there is a different array of constraints associated with different leisure behaviors, the failure of increasing participation and non-participation in desired activity.

Analysis of Demographic Variations in Leisure Constraints

Through various statistical techniques, researchers identified a relatively stable and replicable set of constraint dimensions including the costs of participating, time commitments, the availability and quality of facilities, isolation (socially or

geographically), and personal skills and abilities. At the same time, they also agreed with the fact that no sub-group of the population is entirely free from constraints and each group confronts different types of constraint with a different intensity, although time and cost related constraints consistently ranked among the most widely experienced barriers of various aspects of leisure behaviors (Jackson, 2000). There is also a unique combination of constraints experienced by people of different sub-groups.

Based upon demographic variables, researchers have analyzed sub-sample variations in constraints. According to Jackson and Scott (1999), there are two main trends in the analysis of the influence of demographic variables: focusing on single sub-group and analyzing cross-sample variation by demographic variables. Studies of single sub-groups of the population have often provided a richness and depth of data that have been missing from the broader-based, "general survey" method characteristic of the latter approach.

Of those demographic variables thought to be more influential, gender has probably received the most attention in the literature.

Gender

Most of the early leisure constraint literature have not employed gender as a central variable, but rather as an experimental or control variable (Francken & Van Raaig, 1981; Jackson, 1983; McGuire, 1984; Searle & Jackson, 1985a; Witt & Goodale, 1981). Nevertheless the outcome resulting from the studies have demonstrated some gender differences with regard to the degree of constraints to leisure participation. For instance,

Searle and Jackson (1985a) noted that women face more barriers than men related to cost, housing, physical ability, education, transportation and safety concerns.

Many researchers began not only to incorporate gender as an important factor in explaining leisure behavior and its barriers, but also to focus specifically on women (Bialeschki & Michener, 1994; Bolla, Dawson, & Harrington, 1991; Chambers 1986; Harrington, 1991; Harrington & Dawson, 1995; Harrington, Dawson, & Bolla, 1992; Henderson et al., 1988; Jackson & Henderson, 1995; Rublee & Shaw, 1990; Shank, 1986). For example, Henderson et al. (1988) reviewed past research reporting gender differences and concluded there were five common barriers, namely interest, time, money, facilities, and opportunities. Jackson and Henderson (1995) examined women's leisure constraint experience. The study analyzed the leisure constraints identified by men and women, and provided a theoretical explanation of the presence of gender similarities and differences. The result showed that there are gender differences in terms of the intensity and nature of constraints they experienced and concluded that women are generally more constrained in their leisure than men.

Even though the literature on women's leisure supported that leisure for women is somehow more constrained than leisure for men, they tended to focused on objective leisure constraints such as money (Deem, 1986; Hunter & Whitson, 1992; Searle & Jackson, 1985a), time (Horna, 1989; Searle & Jackson, 1985a; Witt & Goodale, 1981), and lack of opportunities (Deem, 1986; Hall & Richardson, 1982; Hunter & Whitson, 1992; Searle & Jackson, 1985a), all of which could effect both men and women. In response, more recent research has revealed subjective leisure constraints which

particularly affect women. Constraints thought to be women specific, or significantly more prevalent with women are the ethic of care (Harrington, Dawson, & Bolla, 1992; Henderson & Allen, 1991; Lamond, 1992; Shaw, 1999), the lack of a sense of entitlement to leisure (Green, Hebron, & Woodward, 1990; Henderson & Bialeschki, 1991; Shaw, 1999), body image (Frederick & Shaw, 1995), and fear of violence (Fredrick & Shaw, 1995; Shaw, 1999; Whyte & Shaw, 1994).

It has been supported that, because of the ethic of care, women have traditionally been socialized to put the needs of others, particularly their families before their own, therefore neglecting their own leisure needs (Harrington, Dawson, & Bolla, 1992; Henderson & Allen, 1991; Shaw, 1999). With regard to selection of leisure activities and enjoyment of leisure, the ethic of care is again identified as a major constraint on women's leisure lives (Henderson et al., 1992; Lamond, 1992).

Literature on women constraints has reported that not only do women often have little access to time on their own, or personal leisure, but also that they should not have equal rights to recreation participation, that is, lack of a sense of entitlement (Green, Hebron, & Woodward, 1990; Henderson & Bialeschki, 1991; Shaw, 1999). A strong ethic of care may lead many women to feel that it is not their place to pursue leisure activities outside the context of home and the family. This lack of a sense of entitlement to leisure seems to be unique to women (Henderson & Bialeschki, 1991).

Other constraints on women include the issue of body image and safety. Many researchers have suggested that issues pertaining to safety and fear of crime are more salient for women than for men (Fredrick & Shaw, 1995; Shaw, 1999; Whyte & Shaw,

1994). Indeed, even though women's use of public space is relatively open in the United States, many women continue to experience barriers to public spaces. Recent research on constraints associated with participation in aerobics activities suggested that body image problems constrain women's enjoyment of leisure, at least in some activities (Fredrick & Shaw, 1995).

A number of studies examining gender difference in leisure clearly show that gender is a useful and important criterion to segmentation in assessing perceived constraints. Therefore, this study employs gender as one of variables to segment an art market and to analyze constraints experienced by segmented groups.

Lifecycle

Constraint research on women's leisure has developed as a distinctive area of emphasis within leisure studies. However, the body of literature also recognized that gender alone does not explain the diversity of leisure choice and behavior, rather a combination of factors such as age, class, race and other structures influences behavior. Jackson and Henderson (1995) emphasized that "a gender-based analysis may provide enhanced insight into understanding the leisure constraints of individuals when it is combined with an examination of selected contextual factors" (p. 33). Therefore, this study also employs a contextual factor, lifecycle.

The concept of lifecycle represents a process of continuing and expectable changes of life. Through various stages of lifecycle, an individual constantly experiences either an increased vulnerability or an enhanced potential. These events could be

described as ‘at risk’ or ‘at benefit’ as a function of individual’s ability to deal with a particular stage during the lifecycle (Rapoport & Rapoport, 1975). Whether an individual confronts the challenges posed by each lifecycle stage is dependant upon one’s ‘resourcefulness’. For the reason that an individual’s resourcefulness differs across the various stages of the lifecycle, perceived constraints to participation also vary with lifecycle stages.

The concept of lifecycle has been used in constraints research in two forms. First, some researchers have been directly toward identifying constraints which limit leisure behavior at a given life stage, such as later life (Blazey 1987; Buchanan & Allen 1985; Mannell & Zuzanek 1991; McGuire 1982, 1984), or adolescence (Bernard 1988; Hultsman 1992, 1993b; Jackson & Rucks 1993; McMeeking & Purkayastha 1995; Raymore, Godbey, & Crawford 1994; Raymore, Godbey, Crawford, & von Eye 1993; Willits & Willits 1986). Second, other researchers have explored cross-sample variation, looking at how constrains are experienced by different age groups or people in different life stages.

Witt and Goodale (1981) examined barriers to participation across the stages of the family lifecycle and classified them into four different categories based upon their relationship to the family lifecycle stages. Barriers such as the lack of information, the difficulty of partners with whom to participate, and the uncomfortableness show a U-shaped pattern. It seems to fall off from youth to middle age but increase after that. An inverted U-shaped relationship to family lifecycle stages appears for those associated with time and family obligation. Lack of money showed no significant difference across

the lifecycle. It represents the relative importance placed on money as a significant general barrier to leisure over varying family stages for both sexes and for individuals in widely different social circumstances. Various studies reproduced Witt and Goodale's finding concerning barriers to participation across different populations and settings (e.g., Buchanan & Allen, 1985; McGuire et al., 1986; Scott & Jackson, 1996; de Vries & de Bruin, 1996). Even though the studies demonstrated the consistency of Witt and Goodale's study, some differences exist. In particular, fear of crime, lack of time and health were cited as significant reasons given for nonparticipation in leisure activities among old adults in both studies of Buchanan and Allen (1985) and Scott and Jackson (1996). However, McGuire et al. (1986) indicated that personal safety or fear of crime may not be as significant as was found in other studies of leisure constraints.

Operationalization of lifecycle stages

There is no agreement on an operationalization of lifecycle segmentation. Various ways to formulate lifecycle has been applied in the literature: focusing on family stage and parental status (Kelly, 1978; Unkel, 1981; Witt & Goodale, 1981); on the presence or absence of preschool children (Bollman et al., 1975; Duvall, 1971); or on a combination of marital, parental and gender statuses (Altergott & McCreedy, 1993).

One of the common ways to study leisure by lifecycle is to divide people regarding to individual developmental processes. In 1975, Gould segmented adult life into six phases (18-21, 22-28, 29-36, 37-43, 44-50, and 51-60) based on similarities in psychological and biological functions and experiences. Although all these periods are

subject to individual variations, Gould's data indicate that the adult life cycle consists of a developmental sequence through which the majority of people pass in roughly the same order. McGuire et al. (1986) employed eight stages of lifecycle by adding individuals between the ages of 61 and 75 and those aged over 75 as a modification of Gould's model. In study of activity specific constraints on leisure participation, Jackson (1994) utilized a modification of Gould's model to classify subjects into seven age groups.

Among numerous principals existing for conceptualizing the human life cycle, Gould's (1975) model is employed as the basis of theoretical and empirical analyses in the present study.

Art Participation

Numerous research on arts participation has been conducted by the National Endowment for the Arts (NEA) which was established by Congress in 1965 as an independent agency of the federal government. According to Bradshaw (1998), an estimated half of Americans 18 years of age or older, or 97 million people, reported that they attended at least one of seven arts activities (jazz, classical music, opera, musical plays, plays, ballet, or art museums) during the previous 12 months. Bradshaw (1998) reported that visiting art museums was the most popular of these activities, with 34.9 percent of adults reporting visiting at least once, followed by attending musical plays (24.5 percent), non-musical plays (15.8 percent), classical music concerts (15.6 percent), jazz (11.9 percent), ballet (5.8 percent), and opera (4.7 percent).

Concerning the aging of performing and visual arts participants, the NEA Research Division Reports found the importance of age as an important determinant of art participation (Peterson, Hull, & Kern, 2000; Peterson, Sherkat, Balfe, & Meyersohn, 1996; Schuster, 1991). Using the 1997 Survey of Public Participation in the Arts (SPPA) data, a nationwide survey, Peterson, Hull and Kern (2000) sought to find the significance of age in the context of other demographic factors as a determinant of arts participation. They questioned how age determined participation for each of the art forms including jazz, opera, musical and non-musical play, ballet, other dance and museums after statistically eliminating the effect of other demographic variables. In addition, the report asked which of the other variables were the most important in predicting participation in addition to age. A series of ordinary least squares regression analyses showed that there was a significant positive relationship between age and arts attendance for six art activities except jazz when the effect of the control factor were considered (Peterson, Hull, & Kern, 2000). This means that older people participate in all the art forms except jazz more often than do their counter parts of the same education, gender, marital status, income, and so on. However, age is not, in itself, a deterrent to arts participation. Rather, age is frequently combined with other factors in determining art participation such as health, education and income, which also correlate with arts participation (Peterson, Hull, & Kern, 2000).

Gender along with age was found to be an equally important predictor. Considering the relative contribution of each of the control variables, Peterson, Hull and Kern (2000) documented that with the other variables taken into account, women were

significantly more likely to attend each of the art forms, except for jazz. The high proportion of females was more obvious for ballet and musical theater attendance while men attended somewhat, but not significantly, more often for jazz.

A number of NEA reports have examined the importance of demographic variables, especially age and gender, as a determinant of art participation, but few have explored expressed barriers to arts participation and their association with demographic variables (Table 3). Schuster (1991) examined constraints to art museums participation based upon 1985 SPPA data. By employing a logit model, the report found that women were more likely to be constrained than men in their visitation at art museums (Schuster, 1991). The most frequently cited barrier was lack of time (13.7 percent of the population), followed by inconvenient location (6.4 percent), insufficient offerings (6.4 percent) and cost of ticket (4.0 percent). In addition, the results showed that perceived barriers were greater among those who were already attenders than non-attenders. However, even though the model helped distinguish the most highly significant variables in a statistical sense, the overall performance of the model was very weak, explaining only 5 percent of the variation in the dependent variable.

TABLE 3

NEA Research Division Notes and Reports

Number	Title
NEA research division notes	
#14	Age, desire, and barriers to increased attendance at performing arts events and art museums (Feb. 4. 1986)
#18	Population location and the barriers of 'art form not available' and 'too far to go' (Sep. 11, 1986)
#51	Demographic differences in arts attendance: 1982-1992 (Feb. 16, 1994), SPPA
#71	Demographic characteristics of arts attendance: 1997 (Jan. 1999)
NEA research division reports	
#23	The audience for American art museums (Schuster, M. D, 1991)
#34	Age and arts participation with a focus on the baby boom cohorts (Peterson, R. A., & Sherkat, D. E., Balfe, J. H., & Meyersohn, R., 1996)
#39	1997 Survey of public participation in the arts (Bradshaw, T., 1998)
#42	Age and arts participation: 1982-1997 (Peterson, R.A., Hull, P. C., & Kern, R. M., 2000)

Moreover, no attempt has been made to investigate barriers which limit sub-groups of population to arts activity participation.

Given the lack of research attention to constraints related to arts participation, especially experienced by sub-groups, this study extends previous constraint research by determining what constraints limit people's participation at arts activities.

Market Segmentation

Market segmentation is the first step in achieving an effective marketing strategy.

Market segmentation is a process that divides a large market with heterogeneous characteristics, attitudes, preferences, and behaviors into smaller homogeneous groups that allow the use of various combinations of marketing mix approaches. Defining target markets can be considered as a company's effort to tailor its marketing mix for particular customer groups and distribute marketing resources more effectively and, at the same time, to increase the effectiveness of expenditures and the satisfaction level of customers. The importance of understanding the leisure consumers' interesting and the use of target market selection have been emphasized as the means of effective programming (Crompton, 1983; McCarvill, 1993). As markets grew saturated and customer preferences become more volatile, leisure and recreation agencies have been forced to define their market more in a focused manner and, simultaneously, differentiate their product more specifically for continued growth. By employing market segmentation, recreation and leisure programmers might be able to better identify the specific interests and desires of potential participants in order to develop programs or services to fulfill these interests.

A number of segmentation variables have been identified in the market segmentation literature. However, there is no agreement in the literature on the most appropriate or effective approach to segment. In fact, each of the approaches concerned in the literature demonstrates its validity and applicability. Kotler (1994), in discussing the traditional consumer marketing management, divided market segmentation variables into four major areas; geographic, demographic, psychographic, and behavioral. Among them, socio-demographic descriptors such as age, gender, income and occupation have

been the most popular and prevalent form of market segmentation (e.g., Claston, 1995; Minor, 1992; Moschis, 1996). Marketers have also employed product benefits and customers' buying behavior as the basis of market segmentation (e.g., Funsten, 1998; Machauer & Morgner, 2001; Minhas & Jacobs 1996; Rangan, Moriarty, & Swartz, 1992).

Historically, the importance of marketing was not widely recognized in the field of recreation and leisure even though some researchers have already recognized its critical value (Crompton, 1983; McCarvill, 1993). In the leisure and recreation, only a few researchers (e.g., Floyd & Gramann, 1997; Havitz, Dimanche, & Bogle, 1994; Ipson, Ellis, & Singleton, 1995) have discussed market segmentation while tourism and hospitality literature are replete with market segmentation studies. For example, based on the experience and preference, Floyd and Gramann (1997) identified four hunter segments; outdoor enthusiast, high-challenge harvester, low-challenge harvester, and non-harvester using cluster analysis. Meanwhile, Havitz et al. (1994) classified university students market into 6 sub-groups based on their interest involvement profiles.

With criticism of using only one of several approaches to segmentation analysis, recent literature has emphasized the need of 'multistage segmentation' (Morrison, 1996) or a 'combination' (Kotler et al., 1998). Since each individual segmentation approach provides different types of information, the use of 'multistage segmentation' or a 'combination' of multiple variables rather than just one can produce more useful information (Connelly et al., 2000; Middleton, 1994; Morrision, 1996; Kotler et al., 1998; Taylor, 1986). For instance, evidence from Connelly, Brown, and Knuth's (2000) study showed how several types of market segmentation can be combined to better

describe anglers, providing more useful information for fishery managers. Connelly et al. (2000) used five methods of segmentations for these anglers: preferences, fishing experience, geographic, motivations, and product-related interests. Therefore, as one example this study utilized the multi-segmentation approach instead of employing just one single variable.

Regardless of the contribution of market segmentation literature in understanding market characteristics and, in turn, establishing market strategy, it should be noted that most of the literature were unsuccessful to represent whole potential client group. With heavy dependence for the on-site surveys, they did fail to address the needs of non-participant segment (Hudson, 2000; Williams & Basford, 1992;Wright & Goodale, 1991). Further, even though some researchers view non-participants as a high potential market, they often simply assume its homogeneity and no further efforts were given. In overlooking and simplifying the non-participation market, Wright and Goodale (1991) criticized that failure to address non-participant heterogeneity has limited understanding of how consumers differ and respond in terms of product offers. As Wright and Goodale (1991) argue, non-participants confront various kinds of participation barriers and impediments. In addition, a group of non-participants with interest in participation were likely to be converted to participation, showing high potential and latent demand. Therefore, the nature of heterogeneity in non-participant groups allowed researchers to attempt to further subdivide this category into more distinct subgroups. Wright and Goodale (1991) found that both previous experience of an activity and the presence or absence of interest in participation are useful

segmentation criteria for categorizing non-participants as well as participants.

Following the Wright and Goodale's (1991) publication, two other related were reported (Hudson, 2000; Williams & Basford, 1992). Based on the findings of Wright and Goodale's (1991) study, Williams and Basford (1992) segmented non-skiers by level of experience and then subdivided groups by predisposition toward future participation. Cluster analysis techniques applied in this study generated several groups, two of which exhibited high potential for conversion to participate in the activity. Despite dividing potential demand into former participants and non-participants, the authors were unsuccessful in considering differences between the two distinct groups by simply investigating commonalities and differences in constraints experienced by non-skiers regardless of their previous experiences. Hudson (2000) also focused on the latent ski market demand. However, the study also failed to differentiate the two markets by examining gender difference and perceived constraints.

This study takes advantage of this earlier research. The approach is divided into two steps. First, total sample is divided into several groups according to presence or absence of previous participation experience and the presence of interest in (additional) participation; Second, subgroup are also examined with regard to demographic characteristics, lifecycle and gender (Table 4). Based on these identified segments, this study assesses the perceived constraints of participants and non-participants.

TABLE 4

Steps of Multi-Segmentation

Stage 1: Total sample into four sub samples by participation and interest

		Interest	
		Yes	No
Participation	Yes	I	II
	No	III	IV

Stage 2: Segmentation based on sample I by gender and lifecycle

Sub group 1	Sub group 2
Sub group 3	Sub group 4

Segmentation based on sample III by gender and lifecycle

Sub group 1	Sub group 2
Sub group 3	Sub group 4

Hypotheses

The following hypotheses emerge from this review and will be tested.

H1: There are differences in the relative strength and importance of constraints between failure of increasing participation and non-participation in a desired activity.

H2a: There are gender-based differences in the perception of constraints among people who desired to increase participation and non-participants who wished to participate.

H2b: There are lifecycle-based differences in the perception of constraints among people who desired to increase participation and non-participants who wished to participate.

H2c: There are gender-lifecycle based differences in the perception of constraints among people who desired to increase participation and non-participants who wished to participate.

H3: There are differences in the array of constraints among segments based upon previous participation, interest in future participation, gender and lifecycle.

CHAPTER III

METHODS

Source of the Data[1]

The data of the Survey of Public Participation in the Arts (SPPA 1997), sponsored by the National Endowment for the Arts (NEA), was used to segment art museums/galleries market. In 1997, the Survey of Public Participation in the Arts (SPPA) was conducted to determine the extent to which adult Americans throughout the United States participated in the arts. Participation included attending live arts performance and exhibitions, listening to and watching broadcast or recorded arts programs, and personally performing or creating art. The 1997 SPPA provides comprehensive data on participation in the art museums or galleries in the U.S. including barriers which permit the analysis of differences of constraints among identified sub-groups. The nationwide survey of public participation in the arts was conducted by the Westat Corporation of Rockville, Maryland between June and October in 1997.

Major Themes in the Survey

The major themes that the survey was concerned with included:

1. Attendance at live jazz, live classical music, live opera, live musicals, live non-

[1]The data used in this study were collected by Westat Corporation of Rockville and National Endowment for the Arts. Neither the original collectors nor provider are responsible for the interpretation presented here.

musical plays, live ballet, live dance and art museums and latent demand for live arts performances based on the desire to increase participation if the opportunities arises.

2. Participation in the arts through electronic broadcasts and recorded media.
3. Direct and personal participation in the production of arts through performance and creative activity.
4. Participation in other leisure activities like sports, movies, theme park visitation, outdoor recreation, gardening or doing volunteer and charity work.
5. Barriers to participation in the arts
6. General musical preferences
7. Parental, experiential and educational socialization into the arts.
8. Personal background information of respondents.

Data Collection

Data were collected by Westat Corporation from June 1997 through October 1997. Households were sampled from randomly selected telephone numbers using the method called list-assisted random digit dialing (RDD). The individual within each household who was interviewed was the adult with the most recent birthday. Westat obtained 12,349 fully completed interviews. This was an overall response rate of 55

percent of the individuals selected for interviews.

Dependent Variable

The question that measured perceived constraints in the arts participation was analyzed as a dependent variable in this study. Respondents first selected their most preferred live arts activity among eight live arts activities (attending live jazz, live classical music, live opera, live musicals, live non-musical plays, live ballet, and live dance; and visiting art museums), and they were asked why they did not go to performances or art museums as often as they would like. Eleven possible reasons were offered and respondents could cite as many as were applicable. Problems involving tickets being sold out, cost of entrance tickets to performances or exhibits, insufficient offerings, feeling out of place, lack of companions with whom to go to performances, child responsibilities, health problem, inconvenient location, safety, limited time were listed as barriers to participation in the arts.

Independent Variables

Independent variables examined included: (1) the experience of attendance in art museums/galleries; (2) the interest in attending more art museums/galleries; (3) lifecycle; and (4) gender.

The experience of attendance was represented by binary variables, recording whether the respondent participated in art museums/galleries or not over 12 months.

The interest in (additional) participation was measured by asking which activities they would go to do more often than they did in 1997 if they could attend live arts events as often as they wanted. Arts events mentioned in the question were live jazz, live classical musicals, live non-musical plays, live ballet, live dance and art museums.

Gender was measured by recording whether the respondent was male or female.

Age was obtained by asking respondents the year in which they were born. The lifecycle was operationalized by recording age into the following age groups; 18 to 28; 29 to 36; 37 to 43; 44 to 50; 51 to 60; and over 61. While it may have been desirable to maintain McGuire et al (1986)'s eight category classification of lifecycle (18 to 21; 22 to 28; 29 to 36; 37 to 43; 44 to 50; 51 to 60; 61 to 74; and over 75), this study combined the first two categories of the classification and the last two categories into two sub-groups in order to maintain sufficient numbers of respondents to permit statistical analysis.

Table 5 summarizes all dependent and independent variables used in this study.

TABLE 5

List of Dependent and Independent Variables

Dependent Variable	· **Constraints** - cost of entrance ticket - insufficient offerings - feeling out of place - lack of companion - child responsibilities - health problem - inconvenient location - safety - limited time
Independent Variable	· **Experience of attendance in art museums/galleries** Ever visited at art museums/galleries during the last 12 months - Yes/No · **Interest in attending more art museums/galleries** - Yes/No · **Gender** - Male/Female · **Lifecycle** - 18 to 28 - 29 to 36 - 37 to 43 - 44 to 50 - 51 to 60 - over 60

Data Analysis

Data analysis was organized into seven steps (Table 6), including the use of descriptive and inferential statistics. All analyses in this study were conducted using the

SPSS software (Statistical Package for the Social Sciences). Descriptive statistics was employed to examine a demographic profile of people belonging to each segment using descriptive statistics (step 2 and 5). Gender, age, race, residential area, marital status, education, and income distributions for groups in each stage of segmentation were examined. A Chi-square test was involved in testing five hypotheses. With the purpose of testing Hypothesis 1, a Chi-square test was performed to compare between-group differences in the frequency and rank of constraints (step 3). Step 6 involved a Chi-square test to test Hypotheses 2a, 2b and 2c. Hypothesis 3 was tested by comparing the absolute and relative importance of specific constraints and types of constraints associated with sub-segments (step 7).

TABLE 6

Steps of the Data Analysis

STEP	DATA ANALYSIS
STEP 1:	SEGMENTATION STAGE 1: DIVIDING TOTAL SAMPLE INTO FOUR GROUPS
STEP 2:	DEMOGRAPHIC PROFILE OF TWO SELECTED GROUPS
STEP 3:	HYPOTHESIS 1 TESTING (Chi-square TEST)
STEP 4:	SEGMENTATION STAGE 2: SUB-DIVIDING TWO SELECTED GROUPS
STEP 5:	DEMOGRAPHIC PROFILE OF SUB-SEGMENTS
STEP 6:	HYPOTHESIS 2a, 2b and 2c TESTING (Chi-square TEST)
STEP 7:	HYPOTHESIS 3 TESTING

CHAPTER IV

ANALYSIS AND RESULTS

Step 1: Segmentation Stage 1

Dividing Total Sample into Four Segments

The first stage of a multi-segmentation method has been conducted based upon the *yes* or *no* answers to the questions about experience of visiting at art museums/galleries and desire for increasing or beginning the activity. A total of 6,905 respondents were categorized into four groups as shown in Figure 1; (I) 'interested participants', people who had attended art museums/galleries and wished but were unable to increase participation to the desired level (n= 2,554; 20.7%); (II) 'limited interest participants', those who had participated in the activity but did not wish to increase their level of participation (n= 353; 2.9%) (III) 'interested non-participants', those who wished but were unable to begin attend at art museums/galleries (n= 2,311; 18.7%); (IV) 'not interested non-participants', those who had neither participated nor wanted to begin the activity (n= 1,687; 13.7%). The remaining 5,444 respondents of the total 12,349 were identified as inappropriate respondents to be considered since they were not interviewed on their interest in additional/initial participation.

The objectives of the study determined that two segments, Group I (interested participants) and Group III (interested non-participants) were the main focus of the

investigation. They were further divided based on gender and lifecycle.

Step 2: Demographic Profile of Two Selected Groups

The result of the first segmentation indicated that 20.7 percent of the respondents (n= 2,554) had attended art museums/galleries during the last 12 months and wished to participate more in the activity. In addition, 18.7 percent of the respondents (n= 2,311) said that attending art museums/galleries was the activity they would enjoy but were unable to start participating in.

The data in Table 7 summarizes the demographic profile of two groups. Significant differences in gender representation were found in both groups. Comparing the data in this study with the gender ratio of the entire U.S. population (48.9% male versus 51.1% female in U.S. Census Bureau, 1997), an inequality in both the "interested participants" and "interested non-participants" groups clearly existed between male and female (42% male versus 58% female interested participants; 40.7 percent male versus 59.3 percent female interested non-participants).

TABLE 7

Demographic Profile of Two Groups: Interested Participants and Non-Participants

Variable description	**Interested participants** (*N*= 2554)	**Interested non-participants** (*N*= 2311)
Gender	(%)	
Male	42.0	40.7
Female	58.0	59.3
(Missing cases)	(0)	(0)
Age		
18-28	15.7	16.6
29-36	17.9	19.9
37-43	18.1	18.4
44-50	16.4	12.0
51-60	13.9	12.6
Over 60	15.8	18.5
(Missing cases)	(58)	(48)
Race		
Hispanic	8.3	13.0
White	75.6	70.1
African American	8.1	10.2
American Indian	1.1	1.6
Asian	3.6	2.6
(Missing cases)	(85)	(54)
Residential Area		
Metro Area	48.9	37.9
Non-Metro Area	51.1	62.1
(Missing cases)	(0)	(0)

TABLE 7 (Continued)

Variable description	Interested participants	Interested non-participants
Marital Status		
Married/Remarried	53.6	52.5
Widowed	6.5	8.6
Divorced	13.4	13.9
Separated	1.8	2.4
Never married	23.8	22.0
(Missing cases)	(24)	(13)
Education		
Grade school	0.6	4.9
Some high school	3.1	9.0
High school graduate	15.8	35.1
Some college	31.8	30.6
College graduate	24.8	11.9
Graduate school	23.1	7.6
(Missing cases)	(23)	(13)
Income		
$10,000 or less	3.1	8.2
$10,000 to $20,000	7.1	14.4
$20,000 to $30,000	9.3	14.2
$30,000 to $40,000	13.0	15.4
$40,000 to $50,000	10.9	10.3
$50,000 to $75,000	19.1	14.5
$75,000 to $100,000	11.1	5.7
Over $100,000	12.8	4.7
(Missing cases)	(349)	(249)

The members of both groups were young; people under the age of 43 were 51.7 percent of the total interested participants and 54.9 percent of the interested non-participant group; those under the age of 60 were 68 percent and 66.9 percent, respectively (Table 7). However, the proportion of person over 60 years was higher among the interested non-participant group (18.5%) than among the interested participant group (15.8%).

The percentage of those from a non-metropolitan share was slightly higher than those from a metropolitan area in both groups. Non-participants with interest in art museum/galleries visiting had a higher non-metropolitan-to-metropolitan ratio than interested participant groups.

Most members of both the interested participant and the interested non-participants groups were white (75.6/70.1%, respectively) while Hispanics and African Americans comprised around 20 percent of total members of the segments.

There were no substantial between-group differences by marital status. Slightly more than half of persons belonging to both groups (54.6/52.5%) were currently married, around 23 percent were single, and the remaining 22 percent were divorced, separated, or widowed.

The fraction of interested participants that had gone to graduate school was significantly higher (23%) than for interested non-participants (7.6%). Fifty-seven percent of participants with interest had some college education while 43 percent of non-participants with interest had attended college.

Interested participants were relatively well off financially. The top three

household income brackets ($50,000 and above) constituted 43 percent of the total members for the interested participant group while the income brackets contained 25 percent of the interested non-participants group. The interested participant and the interested non-participant groups were generally homogeneous with respect to ratios of gender, race and marital status; however, proportions of age, residential area, education and income showed considerable between-group differences.

The interested participant group was relatively well off financially and well educated. In addition, the interested participants were more highly distributed toward metropolitan areas than the interested non-participants representation while the interested non-participants showed larger proportions of non-metropolitan and people over 60 years.

Step 3: Testing Hypothesis 1

H1: There are differences in the relative strength and importance of constraints between failure of increasing participation and non-participation in a desired activity.

The intent of Hypothesis I was to address the issue of heterogeneity discussed in leisure constraint research by comparing two aspects of constrained leisure, inability to increase participation to desired levels and the desire but inability to participate in new activities among current non-participants. Using a Chi-square test, this study analyzed differences of perceived constraints between participant group having an interest in more visitation at art museums/galleries and non-participant group who would like to attend.

The data in Table 8 summarizes the evidence used to evaluate similarities and dissimilarities in response to constraint items between the two groups. Overall pattern of similarity was found in the absolute and relative importance of constraint items as factors for failing to achieve the desired level of participation and as barriers to participation in leisure activities among the subgroups identified in this study.

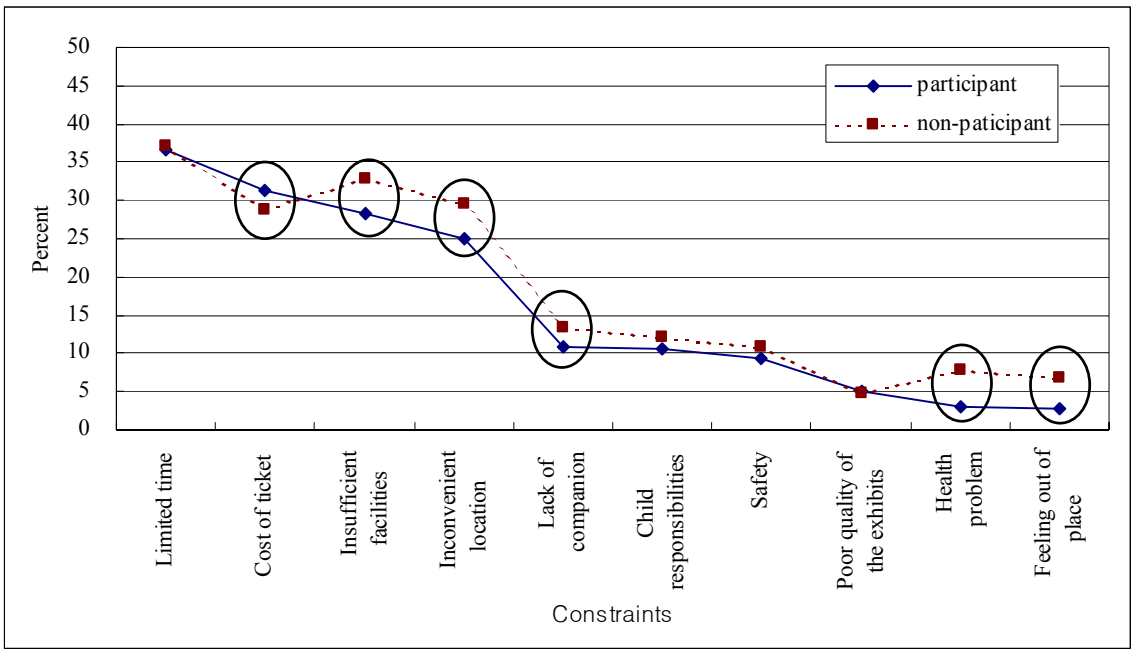
TABLE 8.

Reasons for Ceasing Participation and Barriers to Participation: Response Percentages and Ranks

Item	Reasons for inability to increase		Barriers to participation		χ^2	Sig.
	(%)	Rank	(%)	Rank		
Limited time	36.7	1	37.2	1	0.12	0.726
Cost of ticket	31.4	2	28.7	4	3.99	0.046*
Insufficient facilities	28.4	3	32.9	2	11.60	0.001*
Inconvenient location	25.1	4	29.5	3	11.95	0.001*
Lack of companion	11.0	5	13.4	5	6.85	0.009*
Child responsibilities	10.6	6	12.2	6	2.89	0.089
Safety	9.3	7	10.8	7	3.19	0.074
Poor quality of the exhibits	5.2	8	4.8	10	0.43	0.513
Health problem	3.1	9	7.7	8	53.94	0.000*
Feeling out of place	2.8	10	6.8	9	42.32	0.000*

Note: * indicates a statistical significant difference at the level of .05

However, several items showed significantly between-group differences in the frequency and the rank based on the entire frequency distribution for each item (Figure 1). The items were cost of ticket, insufficient facilities, inconvenient location, lack of companion, poor quality of the exhibits, health problem and feeling out of place. In particular, several items tended to be more frequently stated as barriers to attending an art museum than as reasons for being unsuccessful in attaining the desired level of participation. Insufficient facilities, inconvenient location, health problems and feeling out of place were included in the category.



Note: Circled item indicates a statistical significant difference between two groups at the p≤ .05 level.

Figure 1. Between-group differences on the ten constraint items

On the other hand, cost of the ticket was more often cited as a barrier by participants who are not able to attend art museums/galleries as often as they wanted compared to non-participants with an interest in starting the participation. The statistical significance of these differences was confirmed by using the Chi-square test.

The findings of this supported hypothesis 1.

Step 4 & Step 5: Segmentation Stage 2

Sub-dividing Two Selected Groups & Demographic Profile of the Segments

In the second stage, people belonging to both the interested participant and the interested non-participant groups were sub-divided by gender and lifecycle.

Six categories of lifecycle were utilized in this study: 18 to 28; 29 to 36; 37 to 43; 44 to 50; 51 to 60; and over 60.

Interested Participants

Ninety eight percent (n= 2,495) of the interested participants were classified into one of the 12 groups shown in Table 9. Table 9 also showed the number and percent of members in each sub-segment.

TABLE 9

Multi-Segmentation of Interested Participants

Stage 1: Total sample into four sub samples by participation and interest

		Interest	
		Yes	No
Participation	Yes	I	II
	No	III	IV

Stage 2: Segmentation based on sample I by gender and lifecycle

Lifecycle	Gender	
	Male (n / %)	Female(n / %)
18-28	Group 1 204(8.0)	Group2 197(7.7)
29-36	3 201(7.9)	4 256(10.0)
37-43	5 184(7.2)	6 277(10.8)
44-50	7 186(7.3)	8 232(9.1)
51-60	9 134(5.2)	10 221(8.7)
Over 60	11 144(5.6)	12 259(10.1)

Table 10 shows demographic characteristics of each sub-group. The percent of those married/remarried in Group 1 and 2 were significantly lower than any other groups.

TABLE 10

Demographic Profile of Sub-Groups Who Were Participants with an Interest in Increasing Participation (N=2,554)

Group	18-28		29-36		37-43		44-50		51-60		over 60	
	1	2	3	4	5	6	7	8	9	10	11	12
	(M)	(F)	(M)	(F)	(M)	(F)	(M)	(F)	(M)	(F)	(M)	(F)
Race						(%)						
Hispanic	16.7	14.2	12.9	15.6	7.6	6.1	7.5	4.7	8.2	3.2	2.1	0.4
White	59.8	62.4	66.2	72.7	77.2	79.8	79.0	80.2	73.1	83.7	87.5	90.7
African American	10.3	16.2	10.9	5.5	7.6	6.9	9.1	8.6	8.2	6.8	2.8	4.6
American Indian	1.5	0.5	0.5	2.3	1.1	0.7	0.0	1.3	3.0	0.9	0.7	0.8
Asian	8.3	6.6	7.0	3.1	3.3	4.7	1.6	3.0	1.5	0.9	1.4	0.4
(Missing cases)	(7)	(0)	(5)	(2)	(6)	(5)	(5)	(5)	(8)	(10)	(8)	(8)
Residential Area												
Metro Area	45.6	48.7	51.2	49.2	52.2	46.9	53.8	49.1	48.5	47.1	46.5	47.1
Non-Metro Area	54.4	51.3	48.8	50.8	47.8	53.1	46.2	50.9	51.5	52.9	53.5	52.9
(Missing cases)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Marital Status												
Married/Remarried	18.6	26.9	56.7	60.2	61.4	64.3	71.0	61.2	67.2	62.9	69.4	36.3
Widowed	0.0	0.5	0.5	1.6	0.0	2.2	0.5	1.7	2.2	7.7	9.7	43.2
Divorced	2.9	3.6	5.0	9.8	13.0	18.4	13.4	22.0	19.4	23.1	13.9	13.1
Separated	0.0	1.5	0.5	3.5	1.6	3.2	3.2	3.0	0.7	1.8	1.4	0.4
Never married	77.9	67.5	36.8	25.0	23.9	11.9	11.8	11.2	9.7	4.1	5.6	6.6

TABLE 10. (Continued)

Group	1	2	3	4	5	6	7	8	9	10	11	12
(Missing cases)	(1)	(0)	(1)	(0)	(0)	(0)	(0)	(2)	(1)	(1)	(0)	(1)
Education												
Grade school	0.0	0.0	2.0	1.2	0.5	0.0	0.0	0.4	1.5	0.5	0.7	0.8
Some high school	3.9	6.6	4.0	2.3	3.3	1.8	2.7	0.4	4.5	1.8	3.5	4.2
High school graduate	26.5	19.3	10.9	14.8	14.7	17.7	9.7	13.8	9.0	17.2	12.5	20.5
Some college	44.1	45.2	28.4	32.8	32.1	27.1	29.6	34.1	22.4	26.7	19.4	35.5
College graduate	18.1	22.8	31.3	31.3	27.7	30.7	28.5	23.3	23.1	20.8	20.8	17.4
Graduate school	7.4	6.1	22.9	17.6	21.7	22.0	29.0	28.0	38.8	32.1	42.4	19.7
(Missing cases)	(0)	(0)	(1)	(0)	(0)	(2)	(1)	(0)	(1)	(2)	(1)	(5)
Income												
$10,000 or less	6.9	6.1	2.0	3.5	0.0	2.2	0.5	3.4	2.2	3.6	0.7	5.0
$10,000 to $20,000	9.3	10.7	9.5	7.8	2.7	5.4	4.8	5.2	6.7	4.1	6.9	12.0
$20,000 to $30,000	13.7	16.8	8.0	10.5	6.0	6.9	5.9	8.2	3.0	5.0	9.0	17.4
$30,000 to $40,000	13.7	18.8	15.4	20.7	14.7	11.6	11.3	9.5	6.7	5.9	12.5	13.9
$40,000 to $50,000	14.2	13.7	12.4	12.9	9.2	13.4	8.1	9.1	9.7	9.5	10.4	8.9
$50,000 to $75,000	12.7	11.7	22.4	21.1	28.8	22.0	21.5	20.7	16.4	20.8	19.4	14.7
$75,000 to $100,000	6.9	4.6	10.4	7.4	15.8	13.0	19.4	13.4	17.9	14.5	15.3	3.5
Over $100,000	8.8	5.1	11.4	11.3	14.1	15.2	21.0	17.7	23.9	18.6	12.5	1.5
(Missing cases)	(28)	(25)	(17)	(12)	(16)	(29)	(14)	(30)	(18)	(40)	(19)	(60)

The fraction that included married/remarried persons was 18.6 percent of Group 1 and 26.9 percent of Group 2. A clear difference in the ratio of married to widowed was observed between people who were over 60. Where 69.4 percent of Group 11 was married, that number dropped off dramatically in Group 12 (36%).

Substantial differences also were found between members of Group 1 and 2 and all other groups in terms of education level (Table 10). Group 1 and 2 had less than 10 percent of the total members who had gone to graduate school.

Although not significant, a between-gender difference was found in the data. Generally, male groups (Group 1, 3, 5, 7, 9 & 11) were financially better off than female groups when comparing the faction that had a household income of $ 50,000 or more.

Interested Non-participants

Ninety eight percent (n= 2,262) of total non-participants with interest in starting a new activity were identified lifecycle and gender. The segmentation resulted in 12 sub-groups shown in Table 11.

TABLE 11

Multi-Segmentation of Interested Non-Participants

Stage 1: Total sample into four groups by participation and interest

		Interest	
		Yes	No
Participation	Yes	I	II
	No	III	IV

Stage 2: Segmentation based on sample III by gender and lifecycle

Lifecycle	Gender	
	Male n (%)	Female n (P%)
18-28	Group 1 166(7.2)	Group2 217(9.4)
29-36	3 194(8.4)	4 265(11.5)
37-43	5 185(8.0)	6 240(10.4)
44-50	7 116(5.0)	8 162(7.0)
51-60	9 117(5.1)	10 173(7.5)
Over 60	11 151(6.5)	12 276(11.9)

For the most part, similar age- or gender-based patterns occurred within non-participant groups as shown in Table 12.

TABLE 12

Demographic Profile of Sub-Groups Who Were Non-Participants with an Interest in Starting a New Activity (N= 2,262)

Group	18-28		29-36 (M)		37-43 (M)		44-50		51-60 (F)		over 60	
	1	2	3	4	5	6	7	8	9	10	11	12
	(M)	(F)	(M)	(F)	(M)	(F)	(M)	(F)	(M)	(F)	(M)	(F)
Race												
Hispanic	25.9	20.3	18.6	17.0	9.2	14.2	16.4	8.0	5.1	9.2	6.0	4.0
White	55.4	55.3	66.0	64.9	78.9	66.7	71.6	77.2	83.8	74.0	82.1	80.8
African American	7.8	16.6	7.7	13.2	5.4	14.2	7.8	11.7	6.0	11.0	7.3	9.4
American Indian	1.2	3.2	2.6	1.5	1.1	1.7	0.0	1.2	1.7	1.2	1.3	1.8
Asian	8.4	3.7	2.6	3.0	4.3	1.7	2.6	0.6	0.9	1.7	0.7	0.7
(Missing cases)	(2)	(2)	(5)	(1)	(2)	(4)	(2)	(2)	(3)	(5)	(4)	(9)
Residential Area												
Metro Area	48.2	33.2	42.8	38.9	36.8	38.3	38.8	40.1	41.9	37.0	32.5	30.4
Non-Metro Area	51.8	66.8	57.2	61.1	63.2	61.7	61.2	59.9	58.1	63.0	67.5	69.6
(Missing cases)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Marital Status												
Married/Remarried	20.5	35.5	55.2	61.9	64.9	58.8	67.2	63.0	67.5	54.3	68.9	33.7
Widowed	0.6	0.0	0.0	0.8	0.0	2.9	0.9	4.9	1.7	6.9	11.3	51.8
Divorced	1.8	1.8	9.8	13.6	14.6	22.9	15.5	19.1	20.5	30.1	13.9	10.9
Separated	0.0	1.8	1.0	6.0	1.6	5.4	0.9	3.1	3.4	1.7	0.0	1.1
Never married	77.1	60.8	34.0	17.4	18.9	10.0	15.5	9.3	6.8	6.9	6.0	2.5

TABLE 12 (Continued)

Group	1	2	3	4	5	6	7	8	9	10	11	12
(Missing cases)	(0)	(0)	(0)	(1)	(0)	(0)	(0)	(1)	(0)	(0)	(0)	(0)
Education												
Grade school	2.4	6.5	4.1	3.8	4.3	5.8	4.3	1.2	2.6	5.2	6.0	9.1
Some high school	9.0	12.4	10.8	6.8	7.0	10.8	4.3	6.8	8.5	8.7	13.9	9.4
High school graduate	41.6	33.6	34.0	35.8	30.8	35.8	31.9	36.4	35.9	37.0	25.8	39.1
Some college	34.3	37.3	29.4	32.5	24.9	30.0	29.3	37.0	24.8	30.1	26.5	29.3
College graduate	10.8	6.5	17.0	14.3	23.2	10.0	16.4	8.0	15.4	10.4	9.3	6.9
Graduate school	1.8	3.7	4.6	6.8	9.2	6.3	13.8	9.9	12.0	8.7	18.5	5.1
(Missing cases)	(0)	(0)	(0)	(0)	(1)	(3)	(0)	(1)	(1)	(0)	(0)	(3)
Income												
$10,000 or less	6.0	9.2	1.5	9.4	3.2	8.3	5.2	6.8	6.8	13.3	5.3	16.7
$10,000 to $20,000	17.5	20.3	14.9	11.3	6.5	14.6	8.6	13.0	8.5	11.0	16.6	23.6
$20,000 to $30,000	17.5	13.8	12.9	16.2	13.5	10.4	12.1	9.9	12.0	15.0	18.5	18.1
$30,000 to $40,000	16.3	16.6	20.1	17.4	16.8	17.5	12.1	17.3	8.5	16.2	16.6	9.8
$40,000 to $50,000	8.4	12.0	14.4	14.0	11.9	11.3	10.3	11.1	11.1	9.2	6.6	4.0
$50,000 to $75,000	9.0	10.6	18.6	15.5	23.2	17.5	14.7	17.9	22.2	16.2	13.2	4.3
$75,000 to $100,000	9.0	5.1	6.7	6.0	9.2	4.2	10.3	8.0	6.8	4.0	4.0	1.4
Over $100,000	4.2	1.4	6.2	3.4	6.5	4.6	13.8	6.2	12.0	4.6	4.0	0.0
(Missing cases)	(20)	(24)	(9)	(18)	(17)	(28)	(15)	(16)	(14)	(18)	(23)	(61)

Non-participants, aged 18 to 28 (Group 1 & 2) contained less married/remarried people than all other groups. As can been seen in Table 12, 20.5 percent of Group 1 member and 35.5 percent of Group 2 were classified into those categories. Similar to that found for participants groups, a significant difference was observed between Group 11 (male over 60) and Group 12 (female over 60) on the proportion of marital status. Whereas sixty nine percent of males were married/remarried, only 34 percent of females were currently married.

A gender-based difference was observed in the proportion that had college graduate education (Table 12). Male non-participants were more educated than female non-participant. However, except for Group 11 (male over 60), non-participant groups did not differ in terms of a graduate level of education.

The level of household income also differed between male and female groups. Male groups were financially better off than females. Difference between males and females was 17 percent as large as between Groups 9 (male aged 51 to 60) and 10 (female aged 51 to 60).

Step 6: Hypothesis 2a, 2b, and 2c Testing

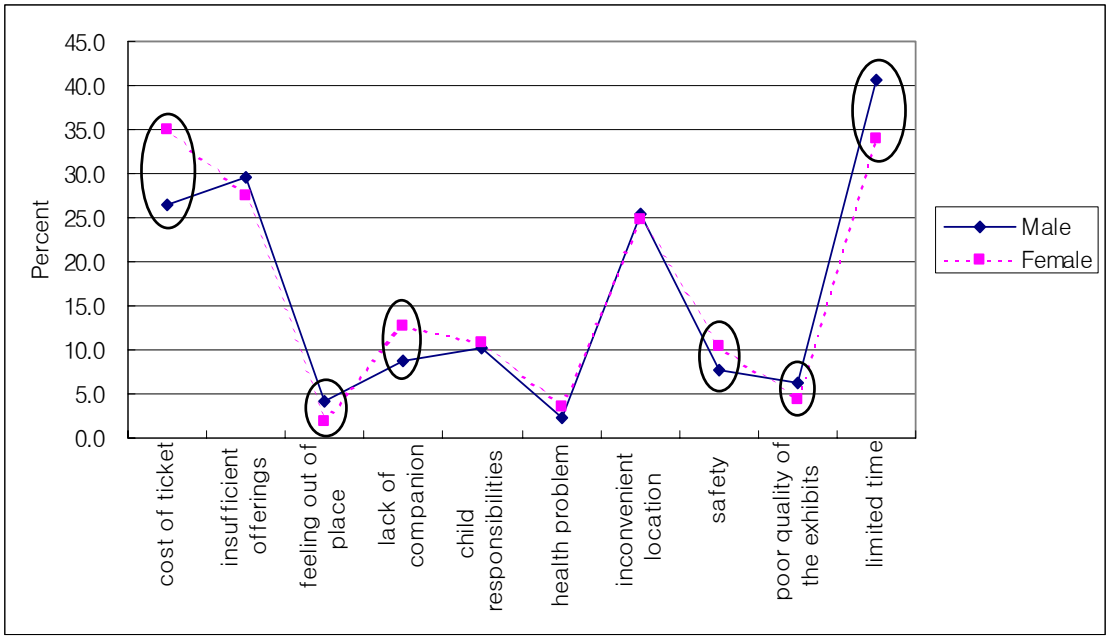
H2a: There are gender-based differences in the perception of constraints among people who desired to increase participation and non-participants who wished to participate.

Interested Participants

A Chi-square test was conducted to identify gender-based differences of

interested participants on 10 constraints items. Between-gender difference scores on six of the 10 specific constraint items were statistically significant (Figure 2). Men and women who had visited art museums/galleries and were interested in additional participation differed with respect to the following items: cost of ticket, feeling out of place, lack of companion, safety, poor quality of the exhibits, and limited time.

Women reported higher levels of constraints than men for three of six significant constraints items: cost of ticket ($\chi 2 = 21.248$, $p < 0.000$), lack of companion ($\chi 2 = 9.943$, $p < 0.002$) and safety ($\chi 2 = 5.209$, $p = 0.022$).



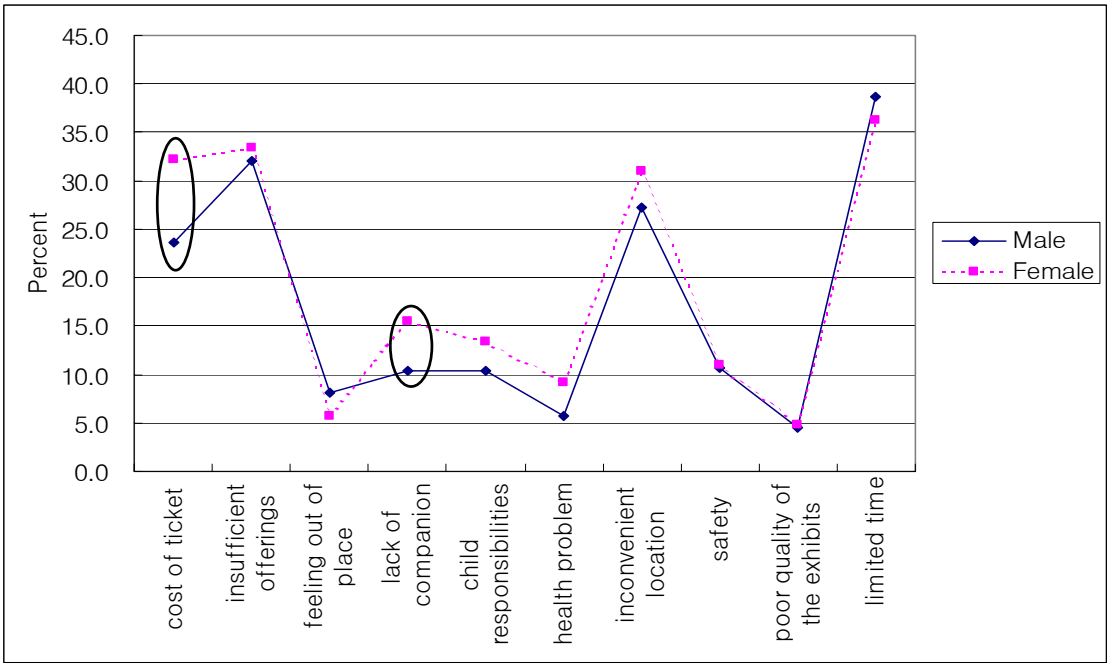
Note: circled item indicates a statistical significant difference between males and females ($p < 0.05$)

Figure 2. Between-gender differences of participant groups in scores on the ten constraint items

Men were more constrained than women on the remaining three items: feeling out of place ($\chi 2 = 11.121$, $p = 0.001$), poor quality of the exhibits ($\chi 2 = 5.185$, $p = 0.023$) and limited time ($\chi 2 = 11.707$, $p = 0.001$).

Interested Non-participants

Men and women who had not attended art museums/galleries but wished to participate were different on two constraint items: cost of ticket ($\chi 2 = 20.754$, $p < 0.000$) and lack of companion ($\chi 2 = 13.275$, $p = 0.001$). Women appeared to be more restricted than men by both constraints (Figure3).



Note: circled item indicates a statistical significant difference between males and females at the .05 level

Figure 3. Between-gender differences of non-participant groups in scores on the ten constraint items

Statistical significant between-group differences in the perception of constraints supported hypothesis 2a.

H2b: There are lifecycle-based differences in the perception of constraints among people who desired to increase participation and non-participants who wished to participate.

Interested Participants

Using a Chi-square test, this study examined lifecycle-based differences of interested participants for 10 constraints items. Excluding 'insufficient offering', nine constraint items have statistical significant between-group differences (Table 13).

TABLE 13

Comparison of Six Interested Participant Groups: Chi-Square Test Results

Constraints	Groups
Cost of ticket	3 * 4 ($\chi2$= 4.970, P= .026) 4 * 5 ($\chi2$= 4.470, P= .034)
Feeling out of place	1 * 3 ($\chi2$= 7.725, P=.005), 1 * 4 ($\chi2$= 10.171, P=.001), 1 * 5 ($\chi2$= 12.685, P<.000), 1 * 6 ($\chi2$= 4.749, P=.029), 2 * 3 ($\chi2$= 5.071, P=.024), 2 * 4 ($\chi2$= 7.289, P=.007), 2 * 5 ($\chi2$= 9.796, P=.002)
Lack of companions	2 * 4 ($\chi2$= 5.388, P=.020), 2 * 5 ($\chi2$= 5.850, P=.016) 4 * 6 ($\chi2$= 4.817, P=.028) 5 * 6 ($\chi2$= 5.294, P=.021)

TABLE 13. (Continued)

Constraints	Groups
Child responsibilities	1 * 2 ($\chi2$= 20.739, P<.000), 1 * 3 ($\chi2$= 22.359, P<.000), 1 * 5 ($\chi2$= 11.636, P=.001); 1 * 6 ($\chi2$= 21.802, P<.000); 2 * 4 ($\chi2$= 14.036, P<.000), 2 * 5 ($\chi2$= 52.190, P<.000), 2 * 6 ($\chi2$= 70.997, P<.000); 3 * 4 ($\chi2$= 15.421, P<.000), 3 * 5 ($\chi2$= 54.291, P<.000), 3 * 6 ($\chi2$= 73.438, P=.000)
	4 * 5 ($\chi2$= 17.582, P<.000), 4 * 6 ($\chi2$= 29.489, P<.000)
Health problem	1 * 4 ($\chi2$= 4.494, P=.034), 1 * 5 ($\chi2$= 5.161, P=.023), 1 * 6 ($\chi2$= 29.915, P<.000); 2 * 4 ($\chi2$= 4.404, P=.036), 2 * 5 ($\chi2$= 5.095, P=.024), 2 * 6 ($\chi2$= 32.500, P<.000); 3 * 4 ($\chi2$= 7.419, P=.006), 3 * 5 ($\chi2$= 8.281, P=.004), 3 * 6 ($\chi2$= 37.884, P<.000); 4 * 6 ($\chi2$= 14.917, P<.000); 5 * 6 ($\chi2$= 11.926, P=.001)
Inconvenient location	1 * 6 ($\chi2$= 4.157, P=.041); 2 * 6 ($\chi2$= 4.447, P=.035)
Safety	1 * 6 ($\chi2$= 6.075, P=.014); 3 * 6 ($\chi2$= 5.072, P=.024)
Poor quality of exhibits	1 * 3 ($\chi2$= 9.265, P=.002); 2 * 3 ($\chi2$= 5.509, P=.019); 3 * 5 ($\chi2$= 5.671, P=.017), 3 * 6 ($\chi2$= 4.640, P=.031)
Lack of time	1 * 6 ($\chi2$= 54.469, P<.000); 2 * 6 ($\chi2$= 66.134, P<.000); 3 * 6 ($\chi2$= 65.651, P<.000); 4 * 6 ($\chi2$= 53.491, P<.000); 5 * 6 ($\chi2$= 41.070, P<.000)

Three items, ‘feeling out of place’, ‘lack of companion’ and ‘poor quality of the exhibits’ showed a U-shaped pattern across the lifecycle (Figure 4). The youngest (age 18-28 & 29-36) and oldest (age over 60) groups appeared to be more restricted than people between 44 to 60 in terms of by these constraints.

An inverted U-shaped pattern was obvious for one constraint: child responsibilities. It appeared that middle-aged individuals (age 29-36 & 37-43) have more obligations for children than their younger (age 18-28) and older counterparts (age 51-60 & over 60).

Problem with health, location, and safety were defined by a positively sloped line. People over 60 were more likely to cite ‘health problem’, ‘inconvenient location’ and ‘safety’ as constraints for a visit to art museums/galleries.

In contrast, there was a decline in the identification of a time constraint as people got older. ‘Limited time’ suddenly became less important as age exceeded 60.

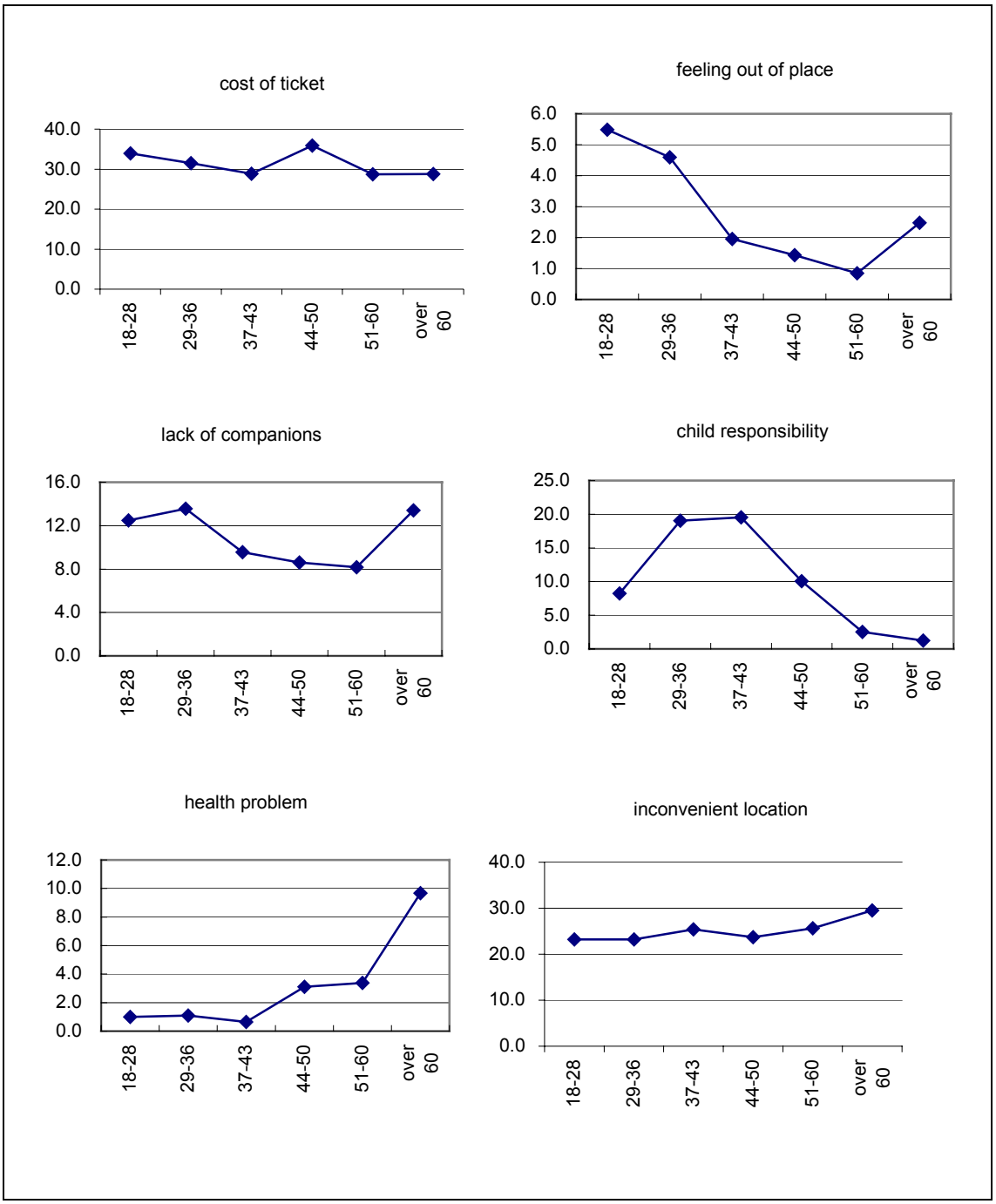


Figure 4. Variations in frequency on the nine constraint items by lifecycle within interested participant groups

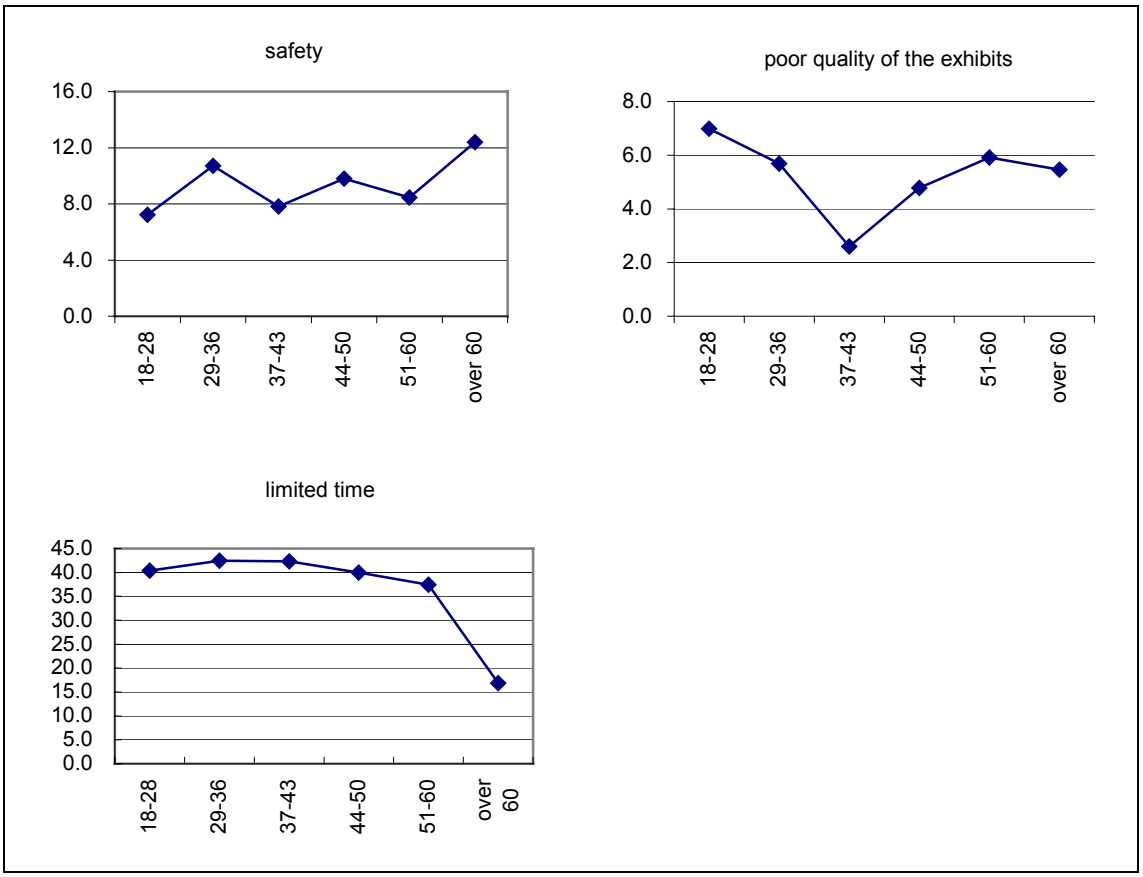


Figure 4. (Continued)

Interested Non-participants

The result indicated that lifecycle-based groups were significantly different in eight of ten items (Table 14): insufficient offerings, lack of companions, child responsibilities, health problem, inconvenient location, safety, poor quality of exhibits and limited time.

TABLE 14

Comparison of Six Interested Non-Participant Groups: Chi-Square Test Results

Constraints	Groups
Insufficient offerings	1 * 5 ($\chi 2$= 4.688, P= .030)
Lack of companions	1 * 2 ($\chi 2$= 5.090, P=.024), 1 * 3 ($\chi 2$= 5.491, P=.019)
Child responsibilities	1 * 4 ($\chi 2$= 8.244, P=.004), 1 * 5 ($\chi 2$= 41.874, P<.000), 1 * 6 ($\chi 2$= 77.368, P<.000); 2 * 4 ($\chi 2$= 12.571, P<.000), 2 * 5 ($\chi 2$= 49.716, P<.000), 2 * 6 ($\chi 2$= 88.743, P<.000); 3 * 4 ($\chi 2$= 5.366, P=.021), 3 * 5 ($\chi 2$= 36.109, P<.000), 3 * 6 ($\chi 2$= 68.567, P<.000); 4 * 5 ($\chi 2$= 15.371, P<.000), 4 * 6 ($\chi 2$= 36.782, P<.000)
Health problem	1 * 4 ($\chi 2$= 6.189, P=.013), 1 * 5 ($\chi 2$= 13.950, P<.000), 1 * 6 ($\chi 2$= 79.497, P<.000); 2 * 3 ($\chi 2$= 4.775, P=.029), 2 * 4 ($\chi 2$= 8.848, P=.003), 2 * 5 ($\chi 2$= 18.546, P<.000), 2 * 6 ($\chi 2$= 97.105, P<.000); 3 * 5 ($\chi 2$= 5.127, P=.024), 3 * 6 ($\chi 2$= 65.908, P<.000); 4 * 6 ($\chi 2$= 38.217, P<.000); 5 * 6 ($\chi 2$= 27.689, P<.000)
Inconvenient location	2 * 5 ($\chi 2$= 5.759, P=.016), 2 * 6 ($\chi 2$= 11.278, P=.001)
Safety	1 * 6 ($\chi 2$= 5.120, P=.024); 3 * 6 ($\chi 2$= 3.936, P=.047)
Poor quality of exhibits	5 * 6 ($\chi 2$= 4.210, P=.040)
Lack of time	1 * 6 ($\chi 2$= 71.017, P<.000); 2 * 6 ($\chi 2$= 78.208, P<.000); 3 * 6 ($\chi 2$= 80.073, P<.000); 4 * 6 ($\chi 2$= 43.719, P<.000)

As shown in Figure 5, three patterns were evident within the four constraint items for which statistically significant lifecycle-based variations emerged. First, three items were characterized by the declining importance of constraints with advancing age: insufficient offerings, child responsibilities and limited time. Second, the effects of 'health problem' and 'safety' increased significantly with age. Third, for 'lack of companions' and 'inconvenient location', a U-shaped relationship emerged. The constraint was less frequently reported by people between the ages of 29 and 36 but more so by younger and older persons. Based on these findings, hypothesis 2b was accepted.

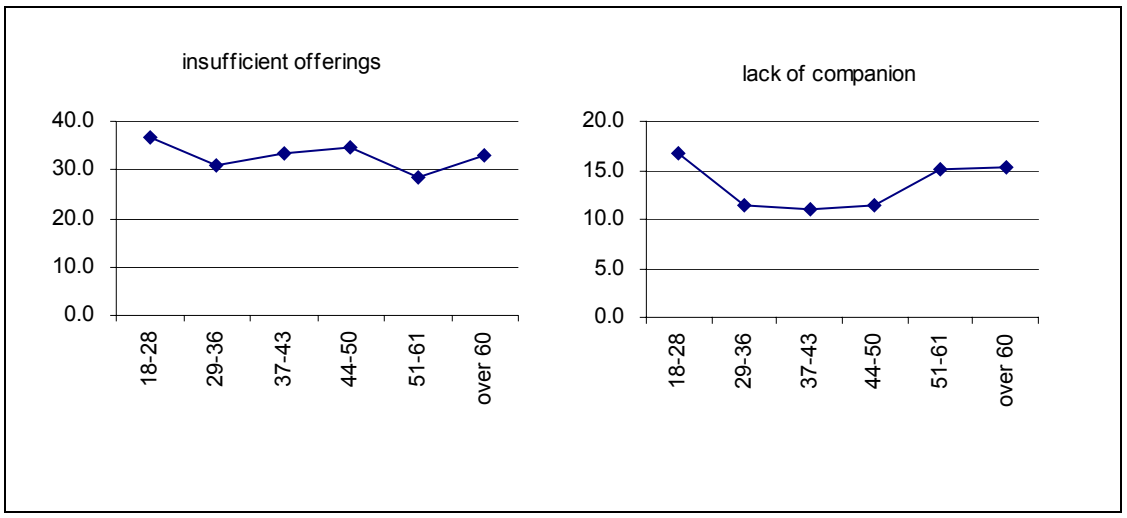


Figure 5. Variations in frequency on the eight constraint items by lifecycle within interested non-participants

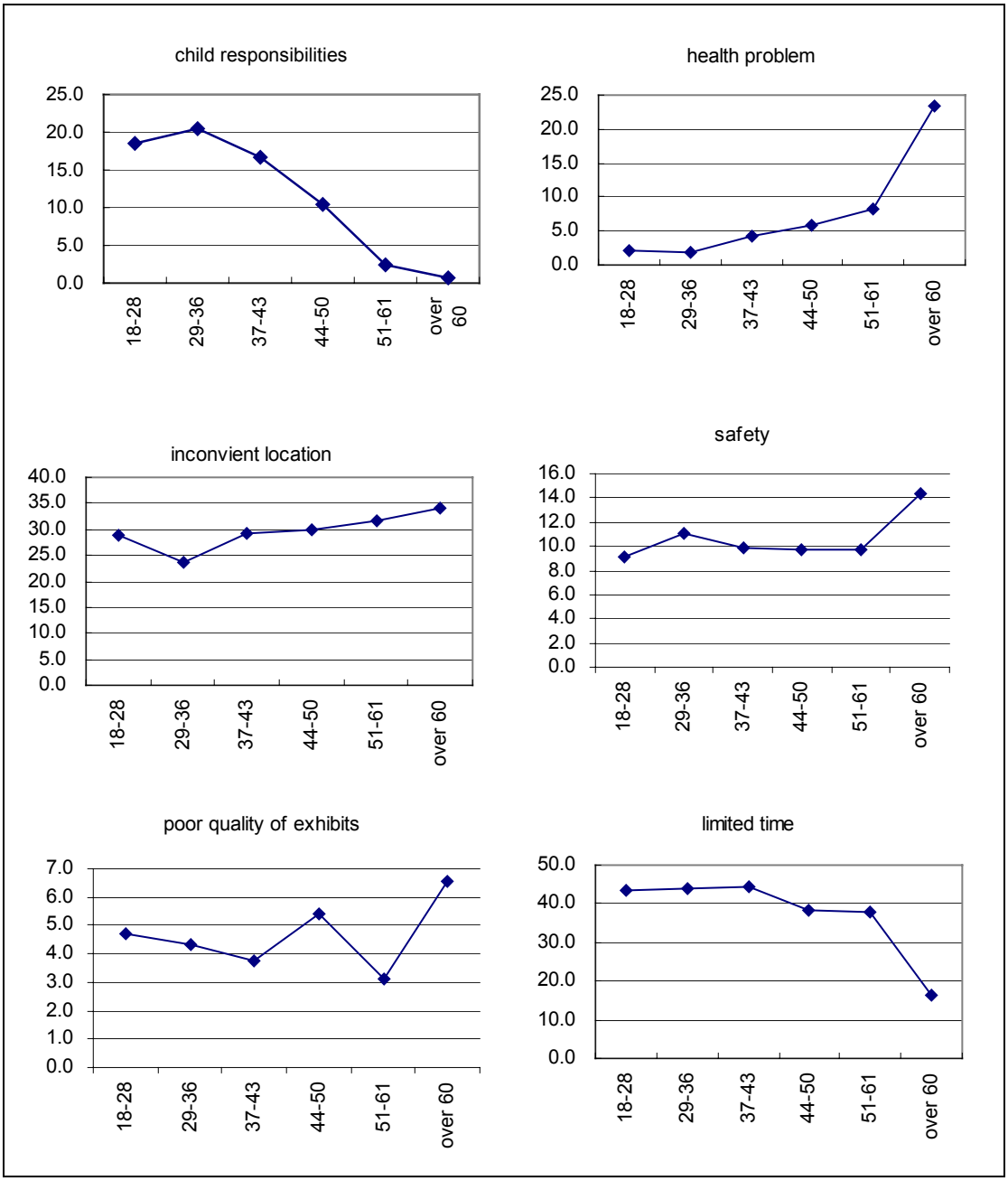


Figure 5. (Continued)

H2c: There are gender-lifecycle based differences in the perception of constraints among people who desired to increase participation and non-participants who wished to participate.

Interested Participants

Using a series of Chi-square test, this study analyzed differences of interested participants in constraints experienced by gender and lifecycle together. Gender-lifecycle based differences were statistically significant for all but one item (Table 15). Twelve interested participant groups did not differ for 'insufficient offerings.'

TABLE 15

Comparison of 12 Interested Participant Groups: Chi-Square Test Results

Constraints	Groups
Cost of ticket	1 * 2 ($\chi2$= 8.961, P= .003), 1 * 3 ($\chi2$= 7.442, P= .006), 1 * 8 ($\chi2$= 9.968, P= .002); 2 * 3 ($\chi2$= 17.071, P< .000), 2 * 5 ($\chi2$= 8.882, P= .003), 2 * 6 ($\chi2$= 5.908, P= .015), 2 * 7($\chi2$= 6.121, P= .013), 2 * 9 ($\chi2$= 7.088, P=.008), 2 * 10 ($\chi2$= 5.784, P=.016), 2 * 11 ($\chi2$= 6.488, P=.011), 2 * 12 ($\chi2$= 6.870, P=.009); 3 * 4 ($\chi2$= 15.385, P< .000), 3 * 6 ($\chi2$= 4.226, P=.040), 3 * 8 ($\chi2$= 18.696, P<.000); 4 * 5 ($\chi2$= 7.388, P= .007) 4 * 6 ($\chi2$= 4.494, P=.034), 4 * 7 ($\chi2$= 4.774, P=.029), 4 * 9 ($\chi2$= 5.761, P=.016), 4 * 10 ($\chi2$= 4.423, P=.035), 4 *11 ($\chi2$= 5.159, P=.023), 4 * 12 ($\chi2$= 5.406, P=.020); 5 * 8 ($\chi2$= 9.831, P=.002), 6 * 8 ($\chi2$= 6.750, P=.009), 7 * 8 ($\chi2$= 6.840, P=.009), 8 * 9 ($\chi2$= 7.760, P=.005), 8 * 10 ($\chi2$= 6.533, P=.011), 8 * 11 ($\chi2$= 7.120, P=.008), 8* 12 ($\chi2$= 7.789, P=.005);

TABLE 15 (Continued)

Constraints	Groups
Feeling out of place	1 * 6 ($\chi2$= 15.497, P<.000), 1 * 7 ($\chi2$= 9.032, P=.003), 1 * 8 ($\chi2$= 12.293, P=.002), 1 * 9 ($\chi2$= 9.234, P=.002), 1 * 10 ($\chi2$= 13.706, P<.000), 1 * 12 ($\chi2$= 10.337, P=.001); 3 * 6 ($\chi2$= 7.894, P=.005), 3 * 7 ($\chi2$= 4.128, P=.042), 3 * 8 ($\chi2$= 6.013, P=.014) 3 * 9 ($\chi2$= 5.200, P=.023), 3 * 10 ($\chi2$= 7.356, P=.007), 3 * 12 ($\chi2$= 4.229, P=.040); 4 * 6 ($\chi2$= 4.456, P=.035), 4 * 10 ($\chi2$= 4.356, P=.037)
Lack of companions	1 * 7 ($\chi2$= 4.669, P=.031), 1 * 11 ($\chi2$= 5.527, P=.019); 2 * 7 ($\chi2$= 5.159, P=.023), 2 * 11 ($\chi2$= 5.997, P=.014); 3 * 7 ($\chi2$= 4.268, P=.039), 3 * 11 ($\chi2$= 5.141, P=.023); 4 * 5 ($\chi2$= 4.525, P=.033), 4 * 7 ($\chi2$= 8.715, P=.003), 4 * 9 ($\chi2$= 4.440, P=.035), 4 * 10 ($\chi2$= 4.398, P=.036), 4 * 11 ($\chi2$= 9.198, P=.002); 5 * 12 ($\chi2$= 8.928, P=.003); 6 * 12 ($\chi2$= 6.483, P=.011); 7 * 12 ($\chi2$= 14.292, P<.000); 8 * 12 ($\chi2$= 5.313, P=.021); 9 * 12 ($\chi2$= 8.129, P=.004); 10 * 12 ($\chi2$= 9.169, P=.002); 11 * 12 ($\chi2$= 14.077, P<.000)
Inconvenient location	2 * 12 ($\chi2$= 5.820, P=.016); 7 * 12 ($\chi2$= 4.312, P=.038)
Safety	1 * 4 ($\chi2$= 9.215, P=.002) 1 * 7 ($\chi2$= 5.427, P=.020), 1 * 10 ($\chi2$= 4.489, P=.034), 1 * 12 ($\chi2$= 10.325, P=.001); 3 * 4 ($\chi2$= 3.982, P=.046), 3 * 12 ($\chi2$= 4.757, P=.029); 4 * 6 ($\chi2$= 4.671, P=.031); 6 * 12 ($\chi2$= 5.623, P=.018); 9 * 12 ($\chi2$= 6.821, P=.009)
Poor quality of exhibits	1 * 6 ($\chi2$= 12.071, P=.001); 2 * 6 ($\chi2$= 7.623, P=.006); 3 * 6 ($\chi2$= 9.798, P=.002); 4 * 6 ($\chi2$= 4.807, P=.028) 6 * 7 ($\chi2$= 4.699, P=.030), 6 * 8 ($\chi2$= 4.799, P=.028), 6 * 9 ($\chi2$= 9.943, P=.002), 6 * 10 ($\chi2$= 5.253, P<.022), 6 * 11 ($\chi2$= 8.916, P=.003), 6 * 12 ($\chi2$= 4.701, P=.030)

TABLE 15 (Continued)

Constraints	Groups
Child responsibilities	1 * 3 ($\chi2$= 7.244, P=.007), 1 * 4 ($\chi2$= 17.573, P<.000), 1 * 5 ($\chi2$= 10.852, P=.001), 1 * 6 ($\chi2$= 15.450, P<.000), 1 * 10 ($\chi2$= 6.130, P=.013), 1 * 11 ($\chi2$= 6.462, P=.011), 1 * 12 ($\chi2$= 11.720, P=.001); 2 * 3 ($\chi2$= 4.168, P=.041), 2 * 4 ($\chi2$= 12.556, P<.000), 2 * 5 ($\chi2$= 7.044, P=.008), 2 * 6 ($\chi2$= 10.727, P=.001), 2 * 9 ($\chi2$= 4.865, P=.027), 2 * 10 ($\chi2$= 9.467, P=.002), 2 * 11 ($\chi2$= 9.046, P=.003), 2 * 12 ($\chi2$= 16.214, P<.000); 3 * 8 ($\chi2$=5.431, P=.020), 3 * 9 ($\chi2$= 14.026, P<.000), 3 * 10 ($\chi2$= 24.548, P<.000), 3 * 11 ($\chi2$= 19.942, P<.000), 3 * 12 ($\chi2$= 35.083, P<.000); 4 * 7 ($\chi2$= 6.983, P=.008), 4 * 8 ($\chi2$= 15.483, P<.000), 4 * 9 ($\chi2$= 23.444, P<.000), 4 * 10 ($\chi2$= 39.853, P<.000), 4 * 11 ($\chi2$= 30.457, P<.000), 4 * 12 ($\chi2$= 53.224, P<.000); 5 * 8 ($\chi2$= 8.827, P=.003), 5 * 9 ($\chi2$= 17.688, P<.000), 5 * 10 ($\chi2$= 30.339, P<.000), 5 * 11 ($\chi2$= 24.145, P<.000), 5 * 12 ($\chi2$= 42.000, P<.000); 6 * 7 ($\chi2$= 5.590, P=.018), 6 * 8 ($\chi2$= 13.366, P<.000), 6 * 9 ($\chi2$= 21.509, P<.000), 6 * 10 ($\chi2$= 36.866, P<.000), 6 * 11 ($\chi2$= 28.274, P<.000), 6 * 12 ($\chi2$= 49.630, P<.000); 7 * 9 ($\chi2$= 8.159, P=.004), 7 * 10 ($\chi2$= 14.920, P<.000), 7 * 11 ($\chi2$= 13.115, P<.000), 7 * 12 ($\chi2$= 23.243, P<.000); 8 * 9 ($\chi2$= 4.403, P=.036), 8 * 10 ($\chi2$= 8.775, P=.003), 8 * 11 ($\chi2$= 8.435, P=.004), 8 * 12 ($\chi2$= 15.263, P<.000)
Health problem	1 * 8 ($\chi2$= 4.698, P=.030), 1 * 9 ($\chi2$= 6.340, P=.012), 1* 11 ($\chi2$= 14.440, P<.000), 1* 12 ($\chi2$= 19.822, P<.000); 2 * 11($\chi2$= 9.176, P=.002), 2 * 12 ($\chi2$= 14.427, P<.000); 3 * 8 ($\chi2$= 4.607, P=.032), 3 * 9 ($\chi2$= 6.225, P=.013), 3 * 11 ($\chi2$= 14.206, P<.000), 3 * 12 ($\chi2$= 19.510, P<.000); 4 * 11 ($\chi2$= 11.003, P=.001), 4 * 12 ($\chi2$= 17.874, P<.000); 5 * 7 ($\chi2$= 5.014, P=.025), 5 * 8 ($\chi2$= 6.469, P=.011), 5 * 9 ($\chi2$= 8.397, P=.004), 5 * 10 ($\chi2$= 5.071, P=.024), 5 * 11 ($\chi2$= 15.916, P<.000), 5 * 12 ($\chi2$= 20.426, P<.000); 6 * 9 ($\chi2$= 4.859, P=.028), 6 * 11 ($\chi2$= 14.495, P<.000), 6 * 12 ($\chi2$= 22.107, P<.000); 7 * 11 ($\chi2$= 5.294, P=.021), 7 * 12 ($\chi2$= 9.709, P=.002); 8 * 11 ($\chi2$= 4.210, P=.040), 8 * 12 ($\chi2$= 8.997, P=.003); 9 * 12 ($\chi2$= 4.061, P=.044); 10 * 11 ($\chi2$= 5.870, P=.015), 10 * 12 ($\chi2$= 11.071, P=.001);

TABLE 15 (Continued)

Constraints	Groups
Lack of time	1 * 11 (F= 19.011, P<.000), 1 * 12 (F= 39.814, P<.000); 2 * 11 (F= 15.061, P<.000). 2 * 12 (F= 32.789, P<.000); 3 * 10 (F=3.869, P=.049), 3 * 11 (F= 20.660, P<.000), 3 * 12 (F= 42.540, P<.000); 4 * 11 (F= 21.243, P<.000). 4 * 12 (F= 44.963, P<.000); 5 * 8 (F= 5.713, P=.017), 5 * 10 (F= 8.605, P=.003), 5 * 11 (F= 28.467, P<.000), 5 * 12 (F= 54.905, P<.000); 6 * 11 (F= 16.006, P<.000). 6 * 12 (F= 36.146, P<.000); 7 * 10 (F= 5.289, P=.021), 7 * 11 (F= 23.052, P<.000), 7 * 12 (F= 46.086, P<.000); 8 * 11 (F= 11.937, P=.001). 8 * 12 (F= 27.948, P<.000); 9 * 10 (F= 3.960, P=.047), 9 * 11 (F= 19.513, P<.000), 9 * 12 (F= 38.293, P<.000); 10 * 11 (F= 8.535, P=.003). 10 * 12 (F= 21.430, P<.000)

The combined effect of gender and lifecycle was observed on four constraint items experienced by interested participants: cost of ticket, feeling out of place, lack of companions and safety. As shown in Figure 6, the effect of 'cost of ticket' on men, unlike the lifecycle pattern, remained relatively stable across lifecycle stages. The scores of 'cost of ticket' on men aged 18 to 28 (Group 1) and 29 to 36 (Group 3) did not follow lifecycle pattern. In addition, men who were younger than 36 were less constrained by monetary issues than men aged 37 to 43.

The combination of gender and lifecycle also revealed that women aged 18 to 28 were less likely to consider 'feeling out of place' as a barrier to art activities than women aged 29 to 36 (Figure 6).

Similarly, men over 60 reported a lower level of constraints than those between the ages of 51 and 60 for 'lack of companions.' This lower score of Group 11 (men over

60) on ‘lack of companions’ did not follow the pattern shown in the lifecycle-based segmentation (Figure 6).

Furthermore, the result showed that men aged 44 to 50 (Group 7) were significantly more likely to state that ‘safety’ limited their participation at art museums/galleries than women aged 18 to 28 (Group 2), 37 to 43 (Group 6) and 44 to 50 (Group 7) even though gender-based segmentation indicated that women were more constrained than men by ‘safety.’

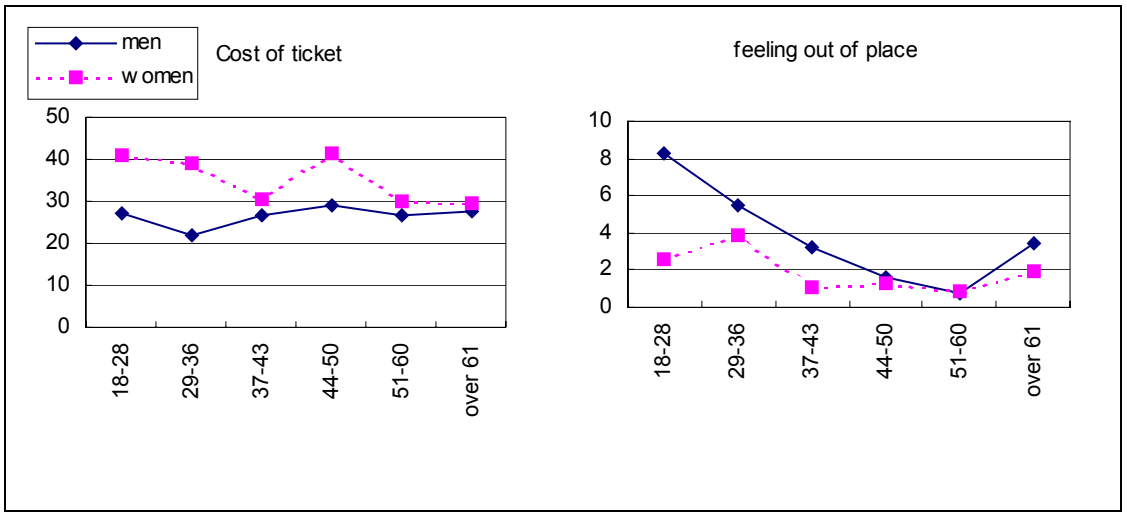


Figure 6. Variations in frequency on the nine constraint items by gender and lifecycle within interested participant groups

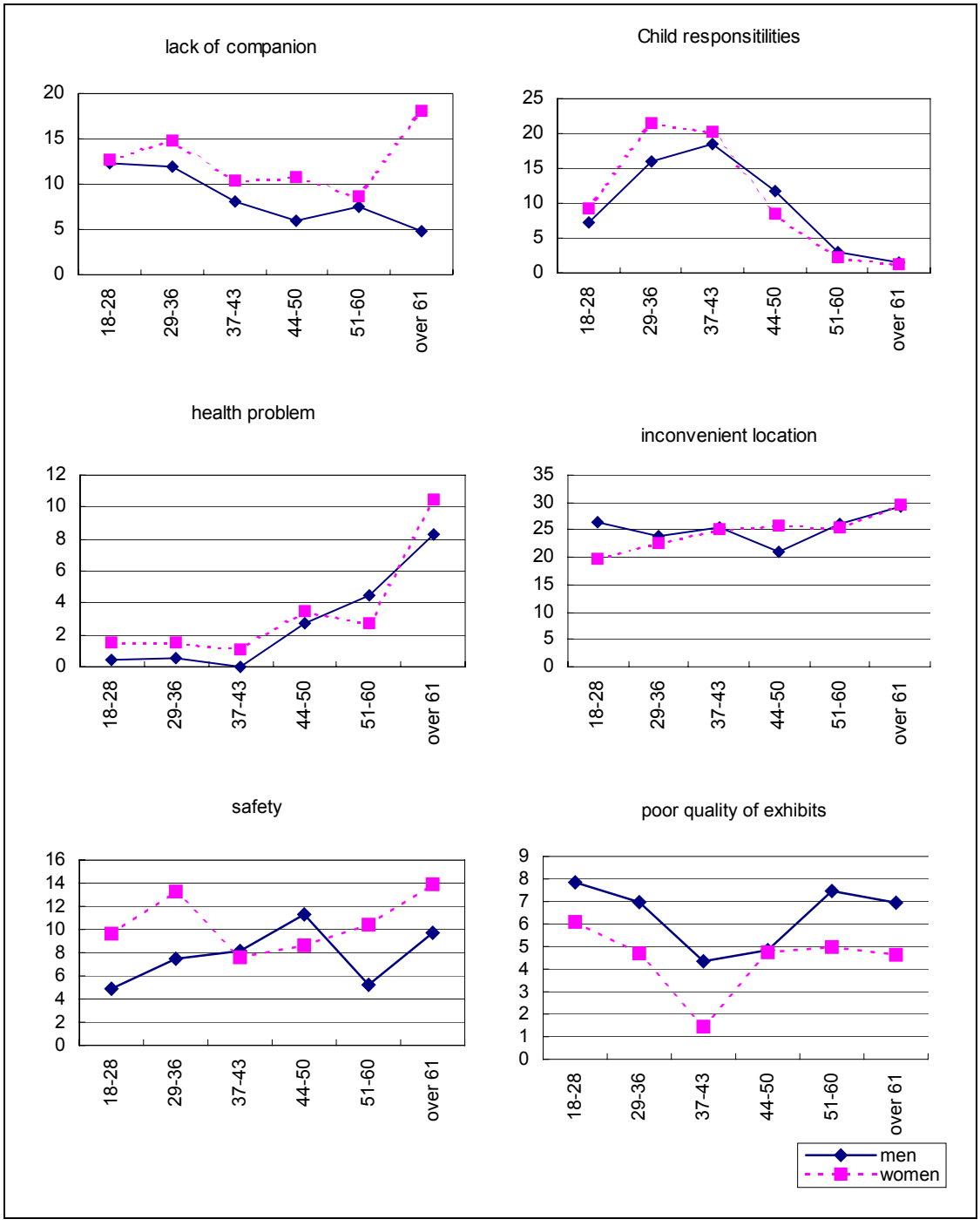


Figure 6. (Continued)

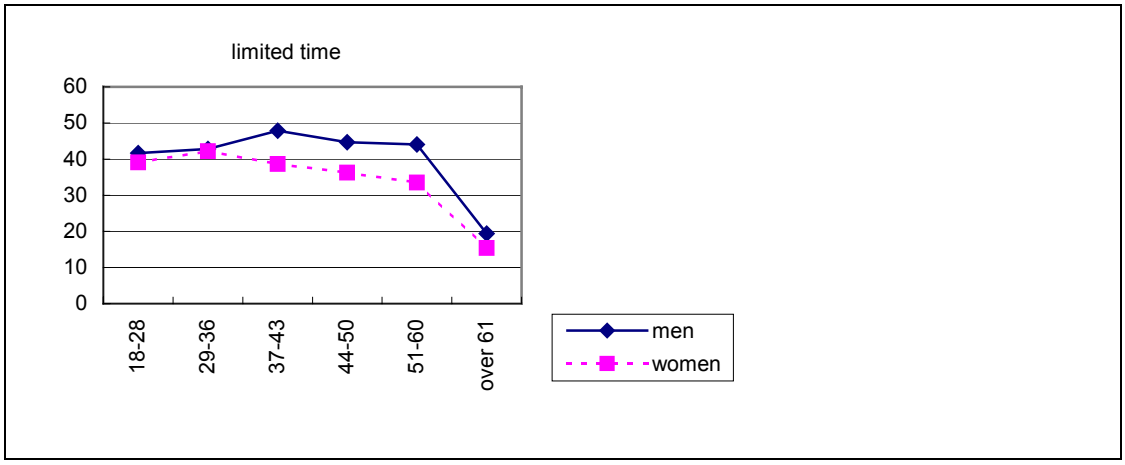


Figure 6. (Continued)

Interested Non-participants

Statistically significant differences among interested non-participant groups defined by gender and lifecycle occurred with all ten items (Table 16).

TABLE 16.

Comparison of 12 Interested Non-Participant Groups: Chi-Square Test Results

Constraints	Groups
Cost of ticket	1 * 4 ($\chi 2$= 3.604, P= .058); 2 * 3 ($\chi 2$= 5.519, P= .019); 3 * 4 ($\chi 2$= 12.408, P< .000), 3 * 6 ($\chi 2$= 9.932, P=.002), 3 * 8 ($\chi 2$= 10.197, P=.001), 3 * 10 ($\chi 2$=10.698, P=.001), 3 * 11 ($\chi 2$= 3.676, P=.055), 3 * 12 ($\chi 2$= 7.251, P=.007); 4 * 5 ($\chi 2$= 5.398, P= .020), 4 * 9 ($\chi 2$= 5.290, P=.021); 5 * 6 ($\chi 2$= 3.878, P=.049), 5 * 8 ($\chi 2$= 4.378, P=.036), 5 * 10 ($\chi 2$= 4.646, P=.031); 6 * 9 ($\chi 2$= 4.024, P=.045); 9 * 10 ($\chi 2$= 4.024, P=.045)

TABLE 16 (Continued)

Constraints	Groups
Insufficient offerings	1 * 3 (χ2= 4.630, P=.031), 1 * 10 (χ2= 4.007, P=.045)
Feeling out of place	1 * 8 (χ2= 5.874, P=.015), 1 * 12 (χ2= 4.107, P=.04.3); 4 * 8 (χ2= 4.617, P=.032); 5 * 6 (χ2= 4.291, P=.038), 5 * 8 (χ2= 6.923, P=.009), 5 * 12 (χ2= 5.301, P=.021); 7 * 8 (χ2= 5.099, P=.024)
Lack of companions	2 * 3 (χ2= 7.7.3, P=.006), 2 * 5 (χ2= 7.618, P.006), 2 * 7 (χ2= 6.151, P=.013), 2 * 11(χ2= 0486, P=.011); 3 * 10 (χ2= 5.902, P=.015), 3 * 12 (χ2= 7.698, P=.006); 5 * 10 (χ2= 5.868, P=.015), 5 * 12 (χ2= 7.600, P=.006); 7 * 10 (χ2= 4.932, P=.026), 5 * 10 (χ2= 6.040, P=.014); 10 * 11 (χ2= 5.04 1, P=.025); 11*12(χ2=6.411,P=.011)
Child responsibilities	1 * 2 (χ2= 8171, P=.004), 1 * 4 (χ2= 9.025, P=.003), 1 * 9 (χ2= 6.585, P=.010), 1 * 10 (χ2= 14.250, P<.000), 1 * 11 (χ2= 16.572, P<.000), 1* 12 (χ2= 28.102, P<.000) 2 * 5 (χ2= 5.757, P=.016), 2 * 7 (χ2= 6.290, P=.012), 2 * 8 (χ2= 13.084, P<.000), 2 * 9 (χ2= 22.290, P<.000), 2 * 10 (χ2= 38.237, P<.000), 2 * 11 (χ2= 38.281, P<.000), 2 * 12 (χ2= 65.691, P<.000); 3 * 1 (χ2= 4. 1 78, P=.04 1), 3 * 9 (χ2= 11.529, P=.001), 3 * 10 (χ2= 22.077, P<.000), 3 * 11 (χ2= 23.673, P<.000), 3 * 12 (χ2= 40.609, P<.000); 4 * 5 (χ2= 6.487, P=.011), 4 * 7 (χ2= 6.855, P= .009), 4 * 8 (χ2= 14.186, P<.000), 4 * 9 (χ223.25 1, P<.000), 4 * 10 (χ2= 39.727, P<.000), 4 * 11 (χ2= 39.468, P<.000), 4 * 12 (χ2= 67.941, P<.000); 5 * 9 (χ2= 3.061, P=.003), 5 * 10 (χ2= 18.227, P<.000), 5 * 1l (χ2= 20.176, P<.000), 5 * 12 (χ2= 34.495, P<.000); 6 * 8 (χ2= 6.861, P*.OO9), 6 * 9 (χ2= 15.612, P<.000), 6 * 10 (χ2= 28.339, P<.000), 6 11 (χ2= 29.212, P<.000), 6 12 (χ2= 50.847, P<.000); 7 * 9 (χ2= 6.114, P=.013), 7 * 10 (χ2= 13.397, P<.000), 7 * 11 (χ2= 16.098, P<.000), 7 * 12 (χ2= 26.847, P<.000);

TABLE 16. (Continued)

Constraints	Groups
Child responsibilities	8 * 10 (χ2= 9.318, P=.002), 8 * 11 (χ2= 11.908, P=.001), 8 * 12 (χ2= 19.931, P<.000); 9 * 12 (χ2=3.967, P=.046)
Health problem	1 * 6 (χ2= 5.193, P=.023), 1 * 7 (χ2= 4.718, P=.030), 1 * 9 (χ2= 5.854, P=.016), 1 * 10 (χ2= 7.937, P=.005), 1 * 11 (χ2= 26.373, P<.000), 1 * 12 (χ2= 42.539, P<.000); 2 * 6 (χ2= 4.947, P=.026), 2 * 7 (χ2= 4.250, P=.039), 2 * 9 (χ2= 5.495, P=.019), 2 * 10 (χ2= 8.019, P=.005), 2 * 11 (χ2= 30.33 1, P<.000), 2 * 12 (χ2= 5 1.104, P<.000) 3 * 6 (χ2= 6.7 19, P=.010), 3 * 7 (χ2= 6.07 1, P=.014), 3 * 9 (χ2=7.431, P=.006), 3 * 10 (χ2= 9.951, P=.002), 3 * 11 (χ2= 31.165, P<.000), 3 * 12 (χ2= 50.203, P<.000) 4 * 6 (χ2= 7.220, P=.007), 4 * 7 (χ^2= 6.144, P=.013), 4 * 9 (χ2= 7.748, P=.005), 4 * 10 (χ2= 11 .053, P=.1), 4 * 11 (χ2= 38.441, P<.000), 4 * 12 (χ2= 63.624, P<.000); 5 * 6 (χ2= 8.036, P=.005), 5 * 7 (χ2= 7.507, P=.006), 5 * 8 (χ2= 4.591, P=.032), 5 * 9 (χ2= 8.929, P=.003), 5 * 10 (χ2= 11 .385, P=.001), 5 * 11 (χ2= 32.610, P<.000), 5 * 12 (χ2= 50.470, P<.000); 6 * 11 (χ2= 14.308, P<.000), 6 * 12 (χ2= 33.262, P<.000); 7 * 11 (χ2= 8.326, P=.004), 7 * 12 (χ2= 17.993, P<.000);8 * 11 (χ2= 15.261, P<.000), 8 * 12 (χ2= 29.836, P<.000); 9 * 11 (χ2=7.181, P= .007), 9 * 12 (χ2= 16.480, P<.000); 10 * 11 (χ2= 7.624, P=.006), 10 * 11 (χ2= 19.974, P<.000)
Inconvenient location	3 * 8 (χ2= 4.932, P=.026), 3 * 10 (χ2= 8.415, P=.004), 3 * 11 (χ2= 5.035, P=.025), 3 * 12 (χ2= 10.783, P=.00l); 4 * 12 (χ2= 5.737, P=.017)
Safety	1 * 9 (χ2= 6.585, P=.010); 2 * 10 (χ2= 5.182, P=.023), 2 * 11 (χ2= 5.773, P=.016), 2 * 12 (χ2= 6.489, P=.011); 3 * 9 (χ2= 4.866, P=.027); 4 * 9 (χ2= 6.685, P=.010); 5 * 9 (χ2=4.782,P=.029); 6 * 9 (χ2= 4.276, P=.039); 7 * 9 (χ2= 5.223, P=.022); 9 * 10 (χ2= 8.745, P=.003), 9 * 11 (χ2= 9.357, P=.002), 9 * 12 (χ2= 9.675, P=.002)

TABLE 16 (Continued)

Constraints	Groups
Poor quality of exhibits	1 * 2 (χ2= 4.184, P.041), 1 * 6 (χ2= 4.091, P.043); 2 * 12 (χ2= 6.804, P.009); 6 * 12 (χ2= 6.878, P=.009); 10 * 12 (χ2= 5.388, P=.020); 11 * 12 (χ2=4.017,P=.045)
Lack of time	1 * 11 (χ2=30.003, P<.000), 1 * 12 (χ243.701, P<.000); 2 * 11 (χ2= 26.569, P<.000), 2 * 12 (χ2= 39.953, P<.000); 3 * 11 (χ2=23.547, P<.000), 3 * 12 (χ2= 34.971, P<.000); 4 * 10 (χ2= 3.972, P=.046), 4 * 11 (χ2=36~88, P<.000), 4 * 12 (χ2= 56.008, P<.000); 5 * 10 (χ2= 4. 1 35, P=.042), 5 * 11 (χ2= 34.737, P<.000), 5 * 12 (χ2= 51.160, P<.000); 6 * 1l (χ2= 29.248, P<.000). 6 * 12 (χ2= 44.445, P<.000); 7 * 1l (χ2= 17.931, P<.000), 7 * 12 (χ2= 24.983, P<.000); 8 * 11 (χ2= 17.458, P<.000), 8 * 12 (χ2= 25.366, P<.000); 9 * 1l (χ2= 18.710, P<.000), 9 * 12 (χ2= 26.104, P<.000); 10 * 1l (χ2= 16.074, P<.000), 10 * 12 (χ2= 23.547, P<.000)

The combined effect of gender and lifecycle was also observed on seven of the ten constraint items: cost of ticket, feeling out of place, lack of companions, child responsibilities, health problem, safety and poor quality of the exhibits.

While significant gender difference were found on only two constraint items, ‘child responsibilities’ and ‘lack of companions’, in hypothesis 2a testing, the combination of gender and lifecycle revealed that men and women at certain lifecycle stages reported different constraint scores on seven items including ‘child

responsibilities' and 'lack of companions'. Statistical significant between-gender differences in 'cost of ticket' were found among people between the ages of 29 and 36 (G3 & G4, F= 12.408, P<.000), 37 and 43 (G5 & G F= 6, 3.878, P= .049) and 51 and 60 (G11 & G12, F= 6.840, P=.009). Between-gender differences were also significant on 'feeling out of place' (G5 & G6, F= 4.291, P=.038; G7 & G8, F= 5.099, P=.024), 'health problem' (G5 & G6, F= 8.036,P=.005), 'safety' (G9 & G10, F= 8.745, P=.003) and 'poor quality of the exhibits' (G1 & G2, F= 4.184, P=.041; G11 & G12, F= 4.017, P=.045).

There were the effects of gender and lifecycle on four constraint items which disagree with lifecycle patterns shown in hypothesis 2b testing (Figure 7). Lifecycle based segmentation on 'lack of companions' in hypothesis 2b testing showed a U-shaped pattern that is the youngest and oldest groups were more constrained than people between the ages of 44 and 60. Nevertheless, the result of analysis showed that men over 60 (Group 11) appeared to be significantly less constrained by 'lack of companions' than those between the ages of 51 and 60. Similar patterns were also found on 'child responsibilities' for men aged 18 to 28 (Group 1), 'safety' for men aged 51 to 60 (Group 9) and 'poor quality of the exhibits' for youngest (Group 1) and oldest (Group 11) male groups. Based on these findings, hypothesis 2c was accepted.

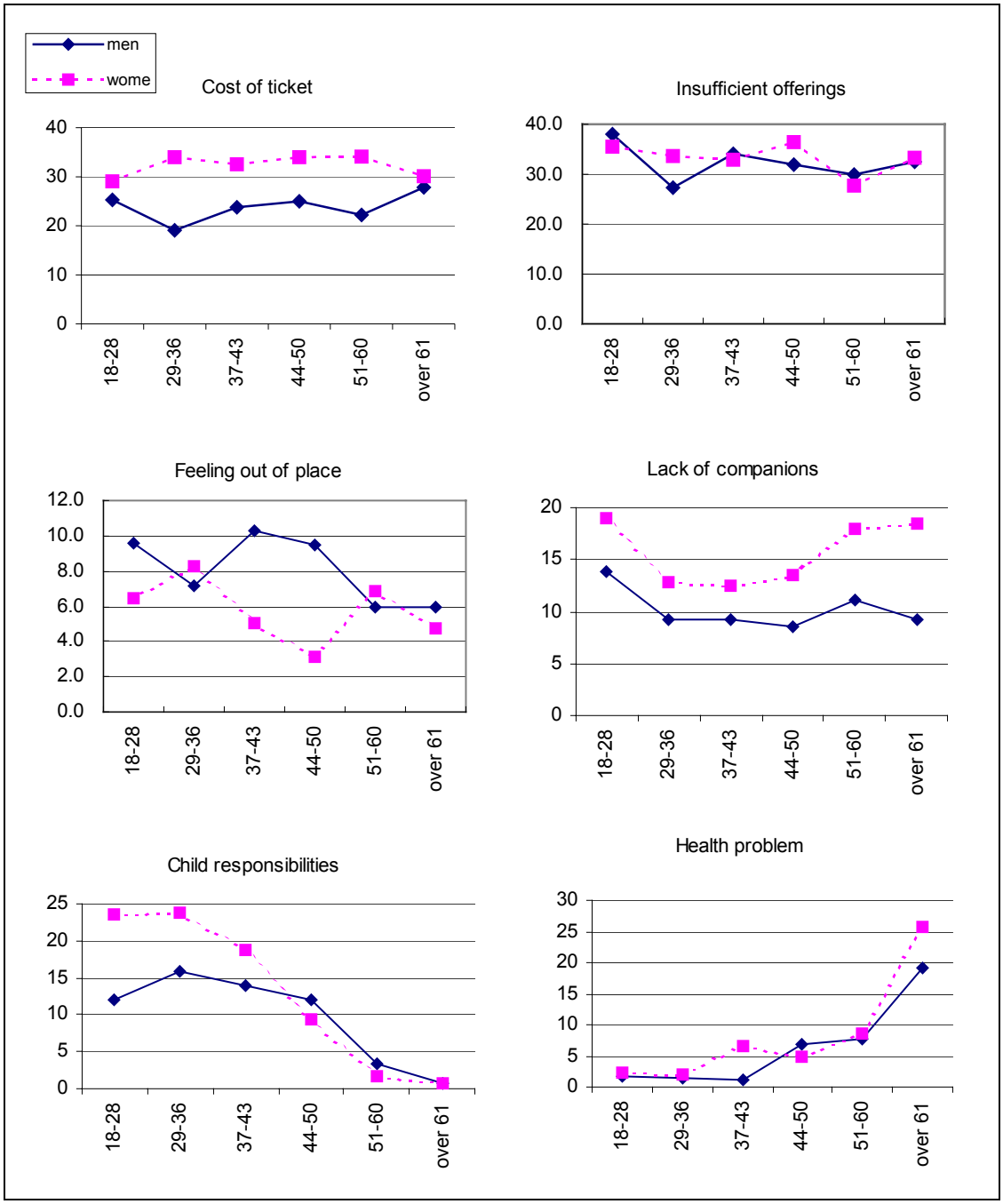


Figure 7. Variations in frequency on the ten constraint items by gender and lifecycle within interested non-participant groups

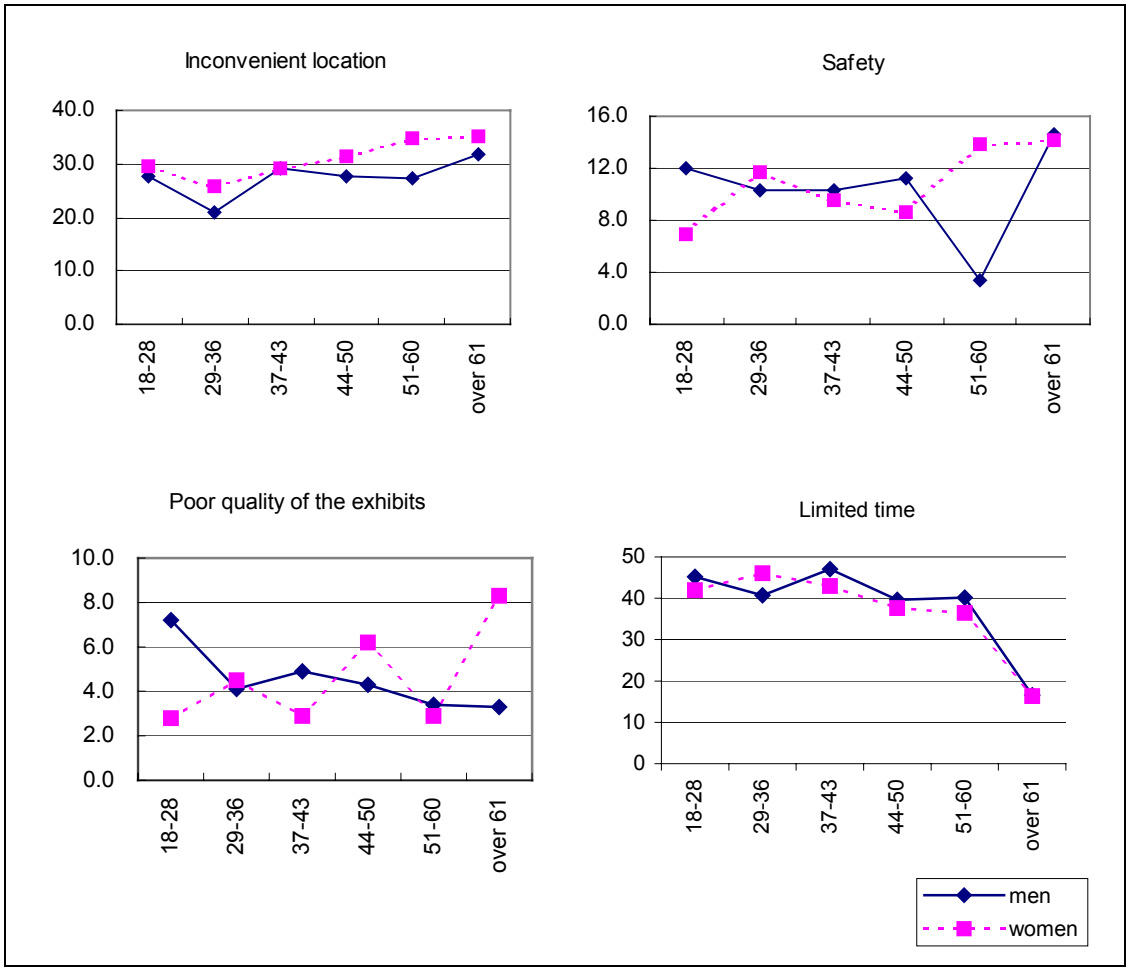


Figure 7. (Continued)

Step 7: Hypothesis 3 Testing

Hypothesis 3: There are differences in the array of constraints among segments based upon previous participation, interest in future participation, gender and lifecycle.

To examine this hypothesis, the analysis was addressed in two ways.

First, the study calculated a total number of barriers for each groups by summing constraints regardless of their type, and then averaged the number of constraints. Second, the study then analyzed a trend of similarity in the absolute and relative importance of the constraints.

Total and mean constraint numbers

The results revealed that non-participant groups were more likely to be constrained than participant groups in art museums/galleries involvement (Figure 8).

Women aged 29 to 36 were the most constrained segment among participant groups with interest for mean number of constraints; male participants aged 44-50 appeared to be less inhibited by these kinds of barriers (Table 17).

For interested non-participant groups, more women than men were likely to perceive constraints to their participation; there was no significance in between-gender difference for interested participant groups (Table 17).

The youngest non-participant group with interest showed the highest average number of constraints.

Male interested participant groups

Identifying a distinctive combination of constraints for each group focused on the changes in the absolute and the relative importance of constraints across the groups simultaneously.

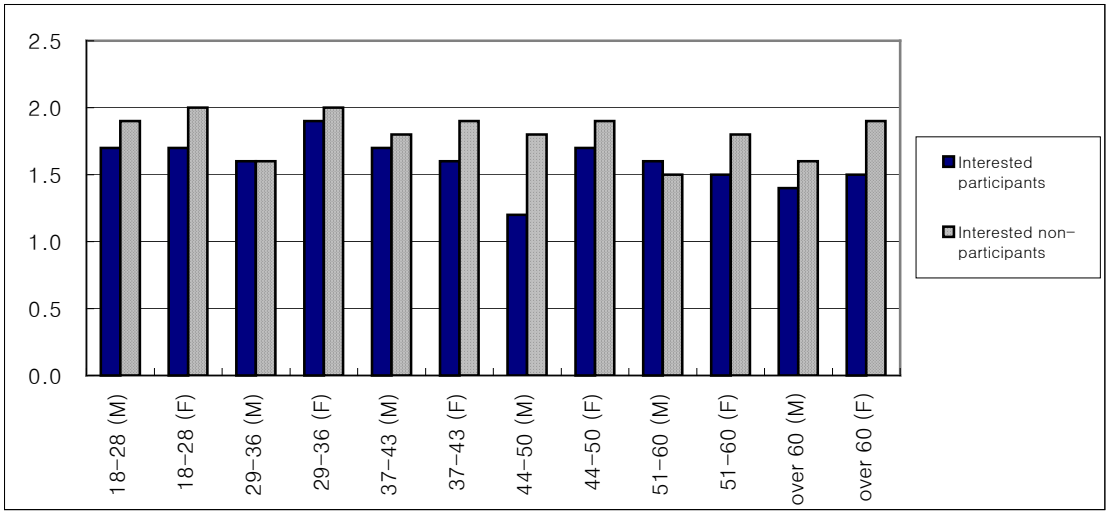


Figure 8. Difference in mean scores of total constraint scores between interested participant and interested non-participant groups

TABLE 17

Total and Average Numbers of Perceived Constraints

Group		18-28		29-36		37-43		44-50		51-60		over 60		Total
		1 (M)	2 (F)	3 (M)	4 (F)	5 (M)	6 (F)	7 (M)	8 (F)	9 (M)	10 (F)	11 (M)	12 (F)	
Interested participants	Total	339	339	330	495	316	446	229	395	214	321	204	390	4,018
	Mean	1.7	1.7	1.6	1.9	1.7	1.6	1.2	1.7	1.6	1.5	1.4	1.5	1.6
Interested non-participants	Total	320	427	304	536	340	463	205	300	181	320	244	516	4,156
	Mean	1.9	2.0	1.6	2.0	1.8	1.9	1.8	1.9	1.5	1.8	1.6	1.9	1.8

As shown in Figure 9, stable patterns were found on ‘lack of time’, ‘insufficient offerings’, ‘inconvenient location’ and ‘cost of ticket’ in male groups between the ages of 18 and 60 in comparison of four top ranked constraints at the same time. Even though the frequencies of four constraints changed among these groups, the relative importance remained quite steady: ‘limited time’ ranked first, ‘insufficient offerings’ second (except for people age 44 to 50), ‘cost of ticket’ third (but groups age 29 to 36 and 44 to 50), and ‘inconvenient location’ fourth (except for those age 29 to 36).

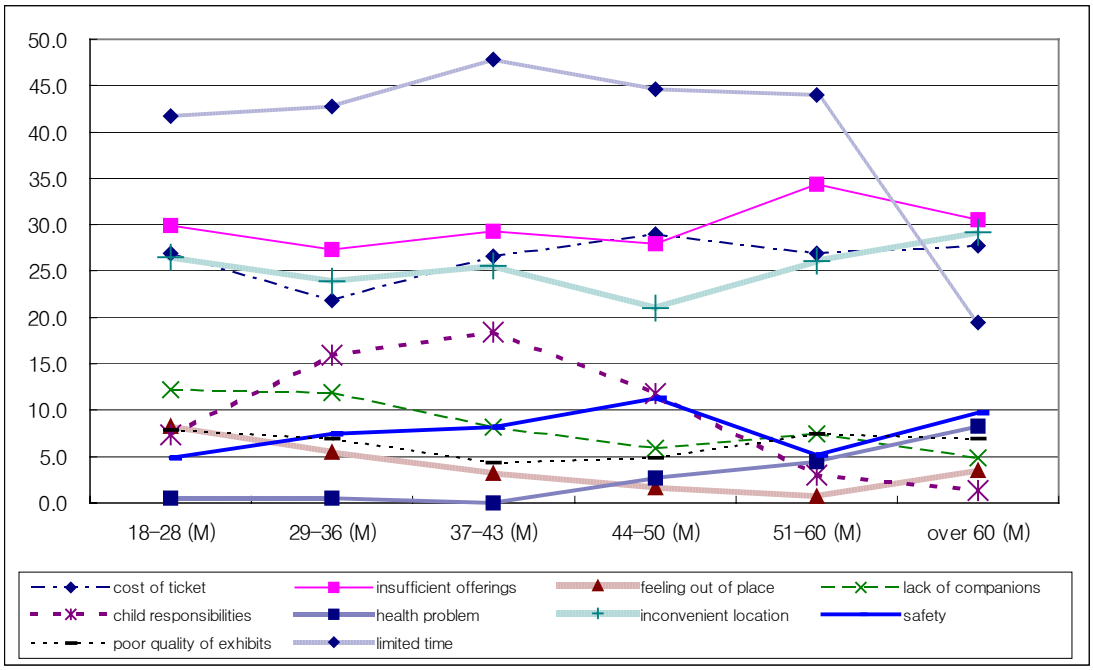


Figure 9. Variations in the frequencies of the ten constraints within interested male participant groups

Group 1, interested male participants aged 18 to 28, was most constrained by 'feeling out of place' among all twelve interested participant groups (Figure 9). People in Group 1 were also more likely than their older counterparts to state that 'lack of companions' and 'poor quality of the exhibits' limited their participation at art museums/galleries.

Rating on 'child responsibilities' remained roughly, but highly, constant from male participants aged 29 to 36 (group 3) to those aged 44 to 50 (group 7).

Male participants in group 3 (age 29 to 36) were highly constrained by 'lack of companions,' whereas they were less likely to cite 'cost of ticket' than other male groups.

The comparison revealed that group 5 (interested male participants age 37 to 43) was the most constrained segment on 'child responsibilities'. Compared with female group of the same age (Group 6), male participants in group 5 were more affected by 'poor quality of the exhibits'.

Individuals belonging to Group 7 reported the highest rate on 'cost of ticket' and 'safety'. The pattern for 'health problem' exhibited an increase from male participants aged 44 to 50 (group 7) to those over 60 (group 11).

Respondents in Group 9 more frequently reported that 'limited time' was a barrier to their participation than same age women participants (Group 10).

The trend in the ten constraints for Group 11 was significantly different from other groups. Whereas the absolute importance on 'insufficient offerings', 'inconvenient location', and 'cost of ticket' was stable, their relative importance changed as a result of significant drop of the rate on 'limited time'.

Further, Group 11 was most constrained by ‘health problem,’ while ‘child responsibilities’ and ‘lack of companions’ showed the lowest rates relative to other male groups.

Female interested participant groups

As Figure 10 demonstrates, Group 2 (interested female participants aged 18 to 28) showed relatively higher scores on ‘cost of ticket’, and lower percentage on ‘health problem’.

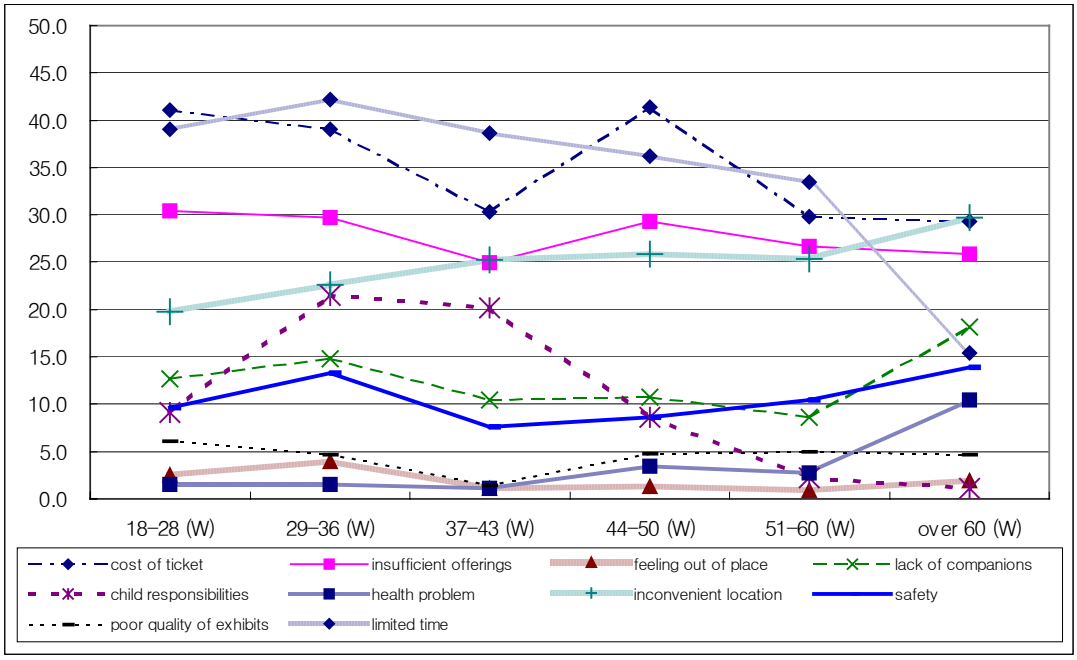


Figure 10. Variations in the frequencies of the ten constraints within interested female participant groups

Individuals belonging to Group 4 who were most constrained by 'child responsibilities' among all twelve interested participant groups indicated that they experienced 'feeling out of place', 'lack of companions', 'child responsibilities' and 'safety' most intensely among female participant segments. Group 4 tended to experience 'health problem' at a lower level.

For female participants aged 37 to 43 who were interested in additional participation (Group 6), there were relative low rates on 'cost of ticket', 'insufficient offerings', 'health problem' and 'poor quality of the exhibits'. However, they were significantly affected by 'child responsibilities' in their participation at art museums/galleries.

Comparing the absolute and relative importance of constraints exhibited that interested female participants age 44 to 50 (Group 8) perceived 'cost of ticket' to be a greater constraint than did all interested participant groups.

Female interested participants aged over 44 (Group 8, 10 & 12) perceived themselves to be more constrained by 'health problem' than their younger segments.

Group 12 differed markedly from the five female interested participant groups in both the absolute and the relative importance of constraints. The highest rates were recorded by respondents in Group 12 on 'lack of companions', 'health problem' and 'safety'. Significant movement in the relative importance of constraints was observed on 'limited time' with the greatest decline over the age of 60.

Table 18 summarizes findings from the analyses of male and female interested participant groups in the relative importance of perceived constraints.

TABLE 18.

Relative Importance of Constraints to Participation Perceived by Interested Participant Groups

Group			Higher	Lower
18-28	1	(M)	Feeling out of place Lack of companions Poor quality of the exhibits	Child responsibilities Health problem
	2	(F)	Cost of ticket	Child responsibilities Health problem
29-36	3	(M)	Lack of companions Child responsibilities	Health problem Cost of ticket
	4	(F)	Feeling out of place Lack of companion Child responsibilities Safety	Health problem
37-43	5	(M)	Child responsibilities Poor quality of exhibits	Health problem
	6	(F)	Child responsibilities	Cost of ticket Insufficient offerings Health problem Poor quality of the exhibits
44-50	7	(M)	Cost of ticket Child responsibilities Health problem Safety	Inconvenient location Lack of companions
	8	(F)	Cost of ticket Health problem	Child responsibilities
51-60	9	(M)	Health problem Limited time	Child responsibilities Feeling out of place
	10	(F)	Health problem	Child responsibilities

TABLE 18. (Continued)

Group			Higher	Lower
over 60	11	(M)	Insufficient offerings (1st) Inconvenient location (2nd) Cost of ticket (3rd) Health problem	Limited time Lack of companions Child responsibilities
	12	(F)	Inconvenient location (1st) Cost of ticket (2nd) Insufficient offerings (3rd) Lack of companions Health problem Safety	Limited time Child responsibilities

Male interested non-participant groups

In comparison of ten constraints, interested male non-participant groups between the ages of 18 to 60 (Group 1, 3, 5, 7 & 9) showed stability in the relative importance of four top ranked constraints: 'limited time' (1), 'insufficient offerings' (2), 'inconvenient location' (3), and 'cost of ticket' (4) (Figure 11).

'Lack of companions' and 'poor quality of the exhibits' were experienced most intensely by Group 1. Furthermore, the rate on 'poor quality of the exhibits' recorded by Group 1 was the highest among all non-participant groups with interest in future participation. Group 1 was found to differ from interested male participants of the same age by the fact that they more often reported 'child responsibilities' as their constraint to art museums/galleries participation.

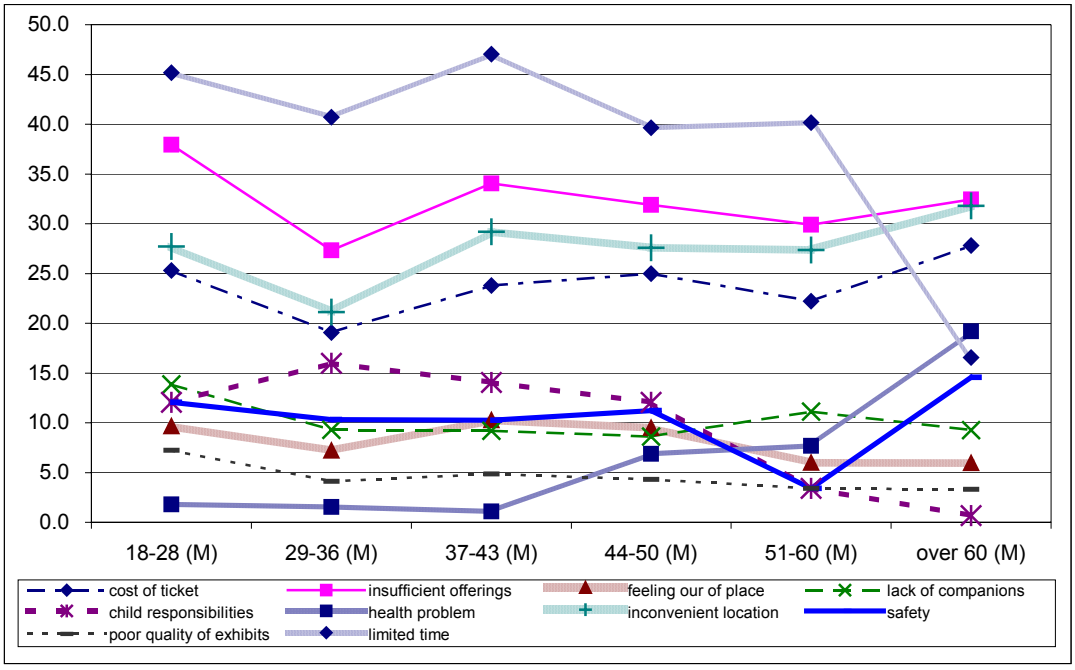


Figure 11. Variations in the frequencies of the ten constraints within interested male non-participant groups

Interested male non-participants between the ages of 18 and 50 (Group 1, 3, 5 & 7) tended to report highest on 'child responsibilities'; the highest rate was recorded by those aged 29 to 36 (Group 3).

Respondents in Group 5 perceived 'feeling out of place' and 'limited time' to be the greatest constraints among all male non-participants with interest.

The importance of 'health problem' significantly increased within group 7 (male non-participants aged 44 to 50) (Figure 11).

Comparison of constraints in terms of the absolute and the relative importance suggested that 'lack of companions' and 'health problem' were often mentioned by

Group 9, who were also likely to disagree that they were limited by ‘safety’ and ‘child responsibilities’.

Similar to interested participants, both the absolute and the relative importance of constraints notably changed within Group 11 (interested male non-participants over 60). The importance of ‘health problem’ ranked fourth while ‘limited time’ ranked fifth. The rate on ‘safety’ exhibited by Group 11 was strongest among male participant groups who were interested in initiating participation.

Female interested non-participant groups

Again, cost of ticket, insufficient offerings, inconvenient location and limited time ranked top four importance inhibitors for women between the ages of 18 and 60 (Figure 12).

In addition, the analysis revealed female interested non-participant groups were more likely to identify ‘cost of ticket’ as a major constraint than male interested non-participant groups.

‘Child responsibilities’ and ‘lack of companions’ were most constraining for female non-participants aged 18 to 28 (Group 2). Moreover, health problem’, ‘safety’, and ‘poor quality of the exhibits’ were found to be less important for individuals in Group 2.

Group 4, interested female non-participant segment aged 29 to 36, recorded the highest rate on ‘limited time’. In addition, people in Group 4 were greatly limited by ‘child responsibilities’.

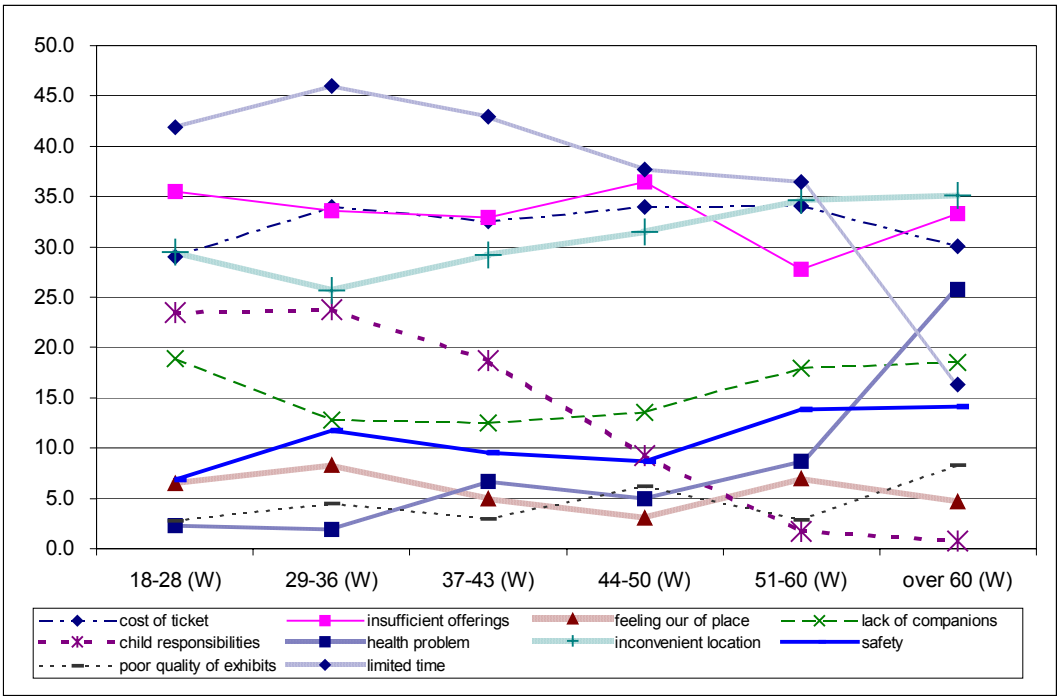


Figure 12. Variations in the frequencies of the ten constraints within interested female non-participant groups

'Child responsibilities' also significantly influenced Group 6 (female interested non-participants age 37 to 43). There was an increased importance of 'health problem' within Group 6.

Women in Group 8 most frequently mentioned 'insufficient offerings'. For 'child responsibilities', female non-participants with interest age 44 to 50 were less likely to be constrained than male non-participants of the same age.

The comparison of the different six female interested non-participant groups showed that older respondents (Groups 10 & 12) were most constrained by 'lack of companions', 'safety', and 'health problem'. In addition, they were most likely to

disagree that they were constrained by ‘child responsibilities’.

A different pattern of gender-lifecycle based trends emerged in Group 12 in terms of the absolute rate and the relative importance. In Group 12, time became a decreasingly salient factor, ranking sixth, while health became more important constraint. Further, female non-participants in Group 12 were far more likely than male non-participants at the same age to mention ‘lack of companions’. Among female interested non-participant groups, Group 12 was most likely to experience ‘safety’ and ‘poor quality of the exhibits’ as constraints to their participation at art museums/galleries.

Table 19 summarizes the findings from the analyses of male and female interested non-participant group in relative importance of perceived constraints.

These findings suggested that each groups did have a distinct combination of perceived constraints relative to those of other segments. Therefore, hypothesis 3 was accepted.

TABLE 19.

Relative Importance of Constraints to Participation Perceived by Interested Non-Participant Groups

Group			Higher	Lower
18-28	1	(M)	Lack of companions Feeling out of place Child responsibilities Poor quality of the exhibits	Health problem
	2	(F)	Lack of companions Child responsibilities	Safety Health problem Poor quality of the exhibits
29-36	3	(M)	Child responsibilities	Cost of ticket Insufficient offerings Inconvenient location Health problem
	4	(F)	Limited time Child responsibilities	Inconvenient location Health problem
37-43	5	(M)	Feeling out of place Child responsibilities Limited time	Health problem
	6	(F)	Child responsibilities Health problem	
44-50	7	(M)	Child responsibilities Health problem	
	8	(F)	Insufficient offerings Health problem Poor quality of the exhibits	Child responsibilities
51-60	9	(M)	Lack of companions Health problem	Child responsibilities Safety
	10	(F)	Lack of companions Health problem Safety	Insufficient offerings Child responsibilities

TABLE 19. (Continued)

Group			Higher	Lower
over 60	11	(M)	Insufficient offerings (1st) Inconvenient location (2nd) Cost of ticket (3rd) Health problem Safety	Limited time Child responsibilities
	12	(F)	Inconvenient location (1st) Insufficient offerings (2nd) Cost of ticket (3rd) Health problem (4th) Lack of companions (5th) Safety Poor quality of the exhibits	Limited time (6th) Child responsibilities

CHAPTER V

DISCUSSION AND CONCLUSIONS

The objectives of this study were: (1) to identify what constraints inhibit people's attendance at art museums/galleries; (2) to address the issue of the internal heterogeneity between two constrained leisure behaviors; (3) to reveal the role of presence or absence of previous participation experience, interest in (additional) participation, gender and lifecycle in perceived constraints to art activities; and (4) to show the validity of segmentation criteria which are presence or absence of participation experience, interest in future participation, gender and lifecycle.

This chapter discusses the study findings and draws conclusions for this study. The chapter consists of three sections. The first section provides summaries and discussions of the each hypothesis test. The second section deals with marketing implications of the study. Recommendations for future research are discussed in the third section.

Discussion of the Hypotheses

Hypothesis 1 was concerned with identifying dissimilarity in the relative strength and importance of constraint items between participants and non-participants who were interested in additional/future participation. The Chi-square test revealed that six of the ten constraint items showed significantly between-group differences. While the result of

the hypothesis 1 test confirmed the internal heterogeneity found in related research (e.g. Jackson & Rucks, 1993; Hultsman, 1993a), the findings indicated that the presence or absence of previous participation experience appeared to be a useful measure for segmenting the art market into homogeneous subgroups in terms of the perception of constraints.

Hypothesis 2a, 2b and 2c tested the variation in the perception of constraints to participation in art activities among subgroups defined by gender, lifecycle or a combination of gender and lifecycle.

In particular, hypothesis 2a examined between-gender differences in the experience of constraints among participants and non-participants who were interested in additional/future participation. Statistically significant between-gender differences emerged on six of the ten constraints in interested participant groups and two in interested non-participant groups.

Hypothesis 2b addressed lifecycle-based differences in the ten constraint items among interested participant and non-participant groups. The statistical significance of differences in nine constraint items for participants with interest in additional participation and eight for non-participants with interest in future participation were confirmed by the Chi-square test.

Hypothesis 2c investigated whether gender-lifecycle based differences exist in leisure constraints among participants and non-participants who were interested in additional/future participation. The result indicated that the effects of leisure constraints were not uniform, but varied in accordance with differences in gender and lifecycle.

While nine of the ten constraint items showed significant gender-lifecycle based differences in interested participant groups, all ten items demonstrated variations in interested non-participant groups.

When participants and non-participants were segmented by gender and lifecycle simultaneously, rather than gender or lifecycle alone, more accurate and detailed information regarding the perception of constraints to leisure participation were obtained. For instance, categorization of people into groups defined by lifecycle stages showed that individuals over 60 felt most constrained by the 'lack of companion.' However, according to the combination of gender and lifecycle, men over 60 overwhelmingly exhibited the lowest rate of the perceived constraints by the 'lack of companion.' People who were male over 60 appeared to be less restricted by 'lack of companion' than not only women at same age but also all other groups.

Thus, the overall results of testing three hypotheses suggested that the combination of gender and lifecycle is a more efficacious segmentation variable than the use of a single variable, gender or lifecycle alone, in understanding perceived constraint measures.

Hypothesis 3 examined how well segmentation based on experience of participation, interest in additional/future participation, gender and lifecycle distinguishes variations in the perceptions of constraints. Categories of respondents defined by four criteria were compared with each other regarding the array and magnitude of constraints, and a series of Chi-square test was run to explore differences among groups. As a result of the analysis, it was found that not only did interested

participant sub-groups categorized by gender and lifecycle significantly differ from interested non-participant sub-groups, but also all sub-groups regardless of previous experience of participation significantly differed from each other with respect to the absolute and relative importance of constraints to art participation. Thus, the results in the present study clearly demonstrated that participation/non-participation, interest or lack thereof in additional/future participation, gender and lifecycle were important segmentation criteria in constructing homogeneous groups with respect to perceived leisure constraints.

When comparing the patterns of constraints across the lifecycle stages and the variation between genders, there is some consistency among the findings of this research and those of other leisure constraint studies. For example, health and child responsibilities related constraints showed a positive relationship and an inverted U-shaped pattern respectively; however, problems with facilities and accessibilities remained stable with advancing age (e.g., Jackson & Henderson, 1992; Scott & Jackson, 1996). In addition, there were gender-based variations on 'safety' and 'child responsibilities' in terms of intensity (e.g., Fredrick & Shaw, 1995; Shaw, 1999; Whyte & Shaw, 1994). Jackson and Henderson (1995) also found that middle-aged women were more likely to be subjected to childcare than men at the same age.

On the other hand, the results of this study tended to contrast with leisure constraint studies when observing overall pattern and intensity simultaneously. For instance, Scott and Jackson (1996) in their study of service, facilities and resource related constraints discovered that problems with facilities and access were ranked

relatively lower, whereas the problems did not appear to vary across age (Jackson & Scott, 1999). On the other hand, 'insufficient offerings' and 'inconvenient location' in this study ranked consistently higher than any other constraint items except for time related measure. Their intensities were stable across all sub-groups defined by gender and lifecycle stages, but the relative importance of 'insufficient offerings' and 'inconvenient location' went up within the oldest group (aged beyond 60), ranking between first and third, associated with a significant drop in 'lack of time' in terms of position in relation to other constraints.

'Lack of companions' also showed differences between previous research and this study. McGuire et al. (1989) suggested that the youngest and oldest group tended to be more constrained than the middle-aged group by lack of companions, showing a U-shaped pattern across lifecycle stages. On the other hand, the problem with companionship in Scott and Jackson's study (1996) was the highest-ranking item among the oldest age group. However, while the pattern of 'lack of companionships' for female participants with interest and non-participants followed previous research, the effect of 'lack of companions' for interested male participant groups demonstrated a declined slop.

Another difference was observed on 'child responsibilities'. According to the statistical analysis of this study, people between the ages of 29 and 43 were the most constrained group on 'child responsibilities'; and women at those ages appeared to be more constrained than men of the same ages. This is typically found in other leisure constraint research. However, comparing their ranks in relative importance did not support the existence of between-gender differences on child related constraints. That is,

while the absolute scores of ‘child responsibilities’ varied between men and women aged 29 to 43, their ranks in relative importance remained the same.

The dissimilarity between the findings of this study and those of other research could be explained in two ways. First, previous research could have missed the fact that there is no between-gender variation on barrier related childcare in terms of the comparative importance with other constraints. A degree of perceived constraint on ‘child responsibilities’ does differ between genders depending on their emotional or physical involvement in a child related task. However, men and women, as they reach middle age, simultaneously experience a substantial increased influence of ‘child responsibilities’ on leisure participation. As a result, both men and women at middle age consider ‘child responsibilities’ as a critical factor in leisure participation. Men at middle age feel that ‘child responsibilities’ is more important than ‘health problem’ and less influential than ‘limited time.’ Women also feel the problem with childcare in the same way. Therefore, men between the ages of 29 and 43 give ‘child responsibilities’ the same priority as women do over other constraints.

On the other hand, this result is a function of the constraint, child responsibilities, on attendance at art activities alone. That means, the array and magnitude of constraints related art activities are somewhat different from other leisure activities.

In the absence of any previous research examining the problem with childcare in the absolute and relative importance concurrently, it is difficult to identify what major factor is. That could be a result of the comparison of ‘child responsibilities’ constraint in the absolute and relative importance within the certain sub-group regardless of the type

of activities, or the effect of childcare related barrier on art activities only.

In the present study, the effectiveness of segmenting respondents based on participation, interest, gender and lifecycle is clearly validated by constructing homogeneous groups in terms of experience of constraints. In addition, the results of this study significantly contribute to knowledge about leisure constraints by demonstrating in what manner and to what extent constraints associated with art activities are similar to and different from those related to other leisure activities.

Implication of the Research Findings

From a marketing standpoint, the findings of this study provide several implications for managers in art activities. First, SPPA data used in this study allowed examination of the characteristics of both non-visitors and visitors. Most museum or gallery surveys which are typically conducted at the door of the museums/galleries are dealing only with visitors. As a result, this study provides useful information for managers of museums/galleries who desire to understand in what ways visitors and non-visitors differ, whether latent demand exists among non-visitors as well as visitors, and who they are in demographic terms.

Second, given the findings of this research, it is possible for art museums/galleries managers to understand the gaps in services that create the impediments for potential clients and the constraints that affect the frequency of participation. The recognition of the gaps should provide a starting point for managers who are charged with the development of programs aimed at removing or reducing the

effects of restrictions and, therefore, facilitating attendance at art museums/galleries.

With respect to developing programs, managers should recognize that there are differences between participants and non-participants in leisure constraints. In addition to the between-group differences, there are within-group variations in constraints to art participation due to simultaneous changes in types of gender across lifecycle stages. Therefore, strategies designed to alleviate or eliminate constraints to leisure participation should be aimed at particular clients in mind.

This study presents several examples of practical implications. First, it was found that the 18-36 age female non-participant groups and over 60 age female groups of both participants and non-participants were far more likely than any other groups to be influenced by 'lack of companions'. If managers in art activities wish to target these groups, social programs designed to bring people together could be considered as a way to reduce problem related companionship.

Second, as described in the earlier discussions of hypotheses testing, 'child responsibilities' was important and prevented middle-age groups from attending art museums/galleries as often as they would like. The effect of childcare related barriers can be removed or lessened by offering creative day care and/or culturally oriented learning programs.

Insufficient offerings and inconvenient location were found to be critical factors that limited participation across all sub-groups. Further, the problem with availability and access were the most important to the oldest group (over the age of 60). From one perspective, it might be related to the pattern of geographical distribution of art related

facilities, which could not be addressed at the agency level. On the other hand, it is also possible to consider that citing 'insufficient offerings' and 'inconvenient location' was one way to express an inaccessibility in terms not only geographical but also psychological. Psychological inaccessibility might be explained as an inappropriate schedule of the delivery of programs and/or lack of information. With respect to the delivery of the programs, rearranging programs to be more flexible in order to avoid a conflict with other obligations should be a useful approach. The managers should not expect their current/potential clients to be flexible enough to meet the given schedules of services. As far as 'lack of information' is concerned, managers can employ information campaigns to increase the public's awareness of ongoing programs. It could be one of the cost-effective marketing strategies.

Recommendations for Future Research

Despite significant contributions of this study, there are some limitations.

First, further empirical research is needed to expand this analysis to include other socio-economic variables (e.g., disposable income, education, race/ethnicity, social class). According to NEA research report #42 (2000), age and gender are not only the factors to affect participations to art activities. Rather, age and gender are often related to other casual factors such as education, health, and income that show relationships with art attendance (Peterson, Hull, & Kern, 2000). That means, art attendance associated with gender and lifecycle stage could vary in concerned with a change in the other circumstances. Therefore, more research is needed to broaden our knowledge about what

changes in individuals' own life would make participation more likely or unlikely.

Second, additional research that uses a qualitative approach is needed. It is possible to assume that missing art-activity-specific constraints exist. The constraints given to respondents in the SPPA survey were chosen because the barriers seem to be self-evident, and they have been employed by previous constraint studies. However, constraints might exist that researchers have not pursued (Shaw, Bonen, McCabe, 1991). In addition, qualitative methods might allow women-specific constraints to emerge. In fact, most gender studies suggested that women are needed to be understood subjectively rather than objectively (Harrington et al., 1992; Henderson, 1994; Shaw1999). Simply suggesting objective answer choices to respondents could not capture the extent and the way which women are constrained in their leisure. Therefore, it is desirable for researchers to employ qualitative methods such as in-dept interviewing and focus group to have opportunities to identify art-activity-specific and women-specific constraints and to evaluate the impact of these constraints.

Third, it may be more desirable to operationalize lifecycle stage by refining age-based differentiation among individuals and by including situational variations. Several studies in leisure constraints suggested that it is inappropriate to consider all individual over 60 as a single homogeneous group. In fact, the intensity and relative importance of constraint to leisure participation significantly differ between individuals in the later life cycle stages (e.g., Buchanan & Allen, 1985; McGuire, 1984). In addition, this study used only age as a basis to define lifecycle stages. However, numerous situational factors such as the presence or absence of children and marital status could worsen or lessen the

degree of the perceptions of constraints to art attendance. Thus, more sophisticated classification of lifecycle stage is necessary for researchers in leisure constraints in order to better understand the change in the experience of constraints tied to lifecycle stage.

Finally, the findings of this study highlight the necessity of investigating the middle age group in terms of the perception of constraints. The middle age groups experienced different types and magnitude of constraints to art activities, depending on variations in demographic factors and their experience of and interest in participation. Nevertheless, there is relative little research conducted with these middle age populations. Thus, leisure constraints associated with individuals at middle age deserves additional attention by researchers.

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